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Afrotropical Asilidae (Diptera) 12. The genus *Neolophonotus* Engel, 1925. Part 1. The *chionthrix, squamosus* and *angustibarbus* species-groups (Asilinae: Asilini)

by

Jason G. H. Londt

(Natal Museum, Pietermaritzburg, South Africa)

ABSTRACT

The genus *Neolophonotus* is discussed. A brief history of work on this huge genus is given, and the methods adopted in the present study are stated. A key to six newly proposed species-groups is provided, *viz. angustibarbus, chionthrix, comatus, pellitus, squamosus* and *suillus* groups. Three of these groups are dealt with, and 38 new species described.

New species in *chionthrix* group: *acuminatus, agrestis, actites, amplus, anguicolis, coetzeei, crassicolis, crenulatus, expandocolis, leucothrix, macrocercus, milleri, namaqua, namibiensis, obtectocolis, robertsoni.*

New species in *squamosus* group: *ausensis, bicuspis, brevicauda, lawrencei, nigriseta, schalki, spinicaudata, squamosus, stevensoni, theroni, truncatus.*

New species in *angustibarbus* group: *culinarius, gertrudae, junodi, kalahari, rolandi, schoemani, swaensis, torridus, trilobius, zimbabwe, zulu.*

New synonyms: *Antilophonotus* Lindner, 1955 (= *Neolophonotus* Engel, 1925); *N. rhodesiensis* Hobby, 1933 (= *N. rapax* (Ricardo, 1920)).

New status: The subspecies *N. molitor chionthrix* Hull, 1967 is raised to full specific status.

New combinations: *Lophonotus albibarbis* Macquart, 1846 is transferred to *Neomochtherus*; *Dasypogon scapularis* Macquart, 1838 is transferred to *Gonioscelis*.

INTRODUCTION

The history of work on the genus *Neolophonotus* Engel, 1925 and closely related genera and subgenera (*Antilophonotus, Hippomachus, Lophopeltis, Lophybus* and *Megadrillus*) dates back to 1805 and is best summarised in a tabulated manner as follows (the generic names used by authors are indicated in parentheses).

Date	Author	Contribution
1805	Fabricius	Describes first species—*suillus (Dasypogon).*
1819	Wiedemann	Adds 2 species *(Asilus).*
1821	Wiedemann	Lists 4 species; 1 new *(Asilus).*
1828	Wiedemann	Lists 5 species; 1 new *(Asilus).*
1838	Macquart	Describes *Lophonotus* listing 11 species; 10 new.
1846	Macquart	Adds 1 new species *(Lophonotus).*
1849	Walker	Lists 10 species; 7 new *(Asilus).*
1854	Loew	Adds 2 new species *(Lophonotus).*
1855	Walker	Lists 23 species *(Asilus).*
1857	Bigot	Describes *Megadrillus.*
1858*a*	Loew	Describes *Trichonotus.* Lists 9 species; 7 new *(Lophonotus).*
1858*b*	Loew	Adds 3 new species *(Lophonotus).*

Date	Author	Contribution
1860	Loew	Repeats 1858 work with elaboration *(Lophonotus & Trichonotus)*.
1866	Schiner	Lists Wiedemann species *(Lophonotus)*.
1867	Schiner	Lists 8 species; 3 new *(Lophonotus)*.
1871	Walker	Adds 1 new species *(Asilus)*.
1892	Bezzi	Adds 1 new species *(Lophonotus)*.
1900	Ricardo	Adds 1 new species *(Lophonotus)*.
1906	Bezzi	Adds 2 new species *(Lophonotus)*.
1907	Hermann	Lists 4 species; 1 new *(Lophonotus)*.
1909	Kertesz	Catalogues 39 species *(Dysmachus, Trichonotus & Megadrillus)*.
1910	Coquillett	Designates *Asilus auribarbis* as type of *Lophonotus* and places *Lophonotus* as a synonym of *Dysmachus*.
1910	Speiser	Adds 1 new species *(Dysmachus)*.
1920	Ricardo	Reviews 28 species; 16 new *(Dysmachus)*.
1922	Ricardo	Adds 1 new species *(Dysmachus)*.
1924	Speiser	Lists 1 species *(Dysmachus)*.
1925	Ricardo	Adds 2 new species *(Dysmachus)*.
1925	Engel	Reviews generic position. Provides *Neolophonotus* (replacing *Lophonotus*) and subgenera *Lophybus* and *Lophopeltis*.
1927	Engel	Lists all species known to him; keys many of these; 4 new. Provides *Hippomachus* (replacing *Trichonotus*). Treats *Hippomachus* and *Megadrillus* as subgenera of *Neolophonotus (Neolophonotus)*
1929	Engel	Lists 5 species *(Neolophonotus & Hippomachus)*.
1932	Cuthbertson	Records 1 species *(Dysmachus)*.
1933	Hobby	Adds 1 new species *(Neolophonotus)*.
1934	Curran	Adds 4 new species—keys 26 *(Lophopeltis)*.
1934	Engel & Cuthbertson	Lists 3 species *(Lophopeltis)*.
1934	Efflatoun	Records 3 species from Egypt *(Neolophonotus & Hippomachus)*.
1934	Hobby	Adds 1 new species *(Neolophonotus)*.
1935*a*	Cuthbertson	Records 1 species *(Lophopeltis)*.
1935*b*	Cuthbertson	Records 2 species *(Lophopeltis)*.
1935	Bromley	Adds 1 species from India *(Neolophonotus)*.
1936	Bromley	Adds 3 species *(Neolophonotus)*.
1937	Cuthbertson	Records 4 species *(Lophopeltis & Neolophonotus)*.
1938	Cuthbertson	Records 2 species *(Lophopeltis)*.
1939	Cuthbertson	Records 1 species *(Lophopeltis)*.
1939	Oldroyd	Lists 2 species; 1 new *(Neolophonotus)*.
1947	Bromley	Adds 2 new species *(Neolophonotus)*.
1949	Bromley	Records 3 species *(Neolophonotus)*.
1955	Lindner	Describes *Antilophonotus*.

Date	Author	Contribution
1961	Lindner	Records 6 species. *(Megadrillus, Lophopeltis, Neolophonotus & Dysmachus).*
1962	Hull	Revises genera; lists 72 species *(Antilophonotus, Megadrillus, Hippomachus & Neolophonotus)*
1963	Oldroyd	Provides key to genera—giving full generic status to all Engel's subgenera *(Neolophonotus, Lophybus, Megadrillus, Lophopeltis & Hippomachus).*
1967	Hull	Lists 17 species; 9 new. Describes 4 new subspecies *(Megadrillus, Neolophonotus).*
1973	Lindner	Records 2 species *(Neolophonotus).*
1974	Oldroyd	Briefly deals with *Neolophonotus*; presents key based on Engel.
1975	Oldroyd	Catalogues 1 oriental species *(Neolophonotus).*
1980	Oldroyd	Catalogues Afrotropical species. Lists 80 *Neolophonotus* (plus 8 synonyms and 7 subspecies). Lists 1 *Antilophonotus* and 2 *Megadrillus* (plus 1 synonym). Places *Lophonotus, Trichonotus, Lophybus, Lophopeltis & Hippomachus* in synonymy of *Neolophonotus.*
1983	Londt	Reinstates *Hippomachus*; reviews all known species; 2 new.

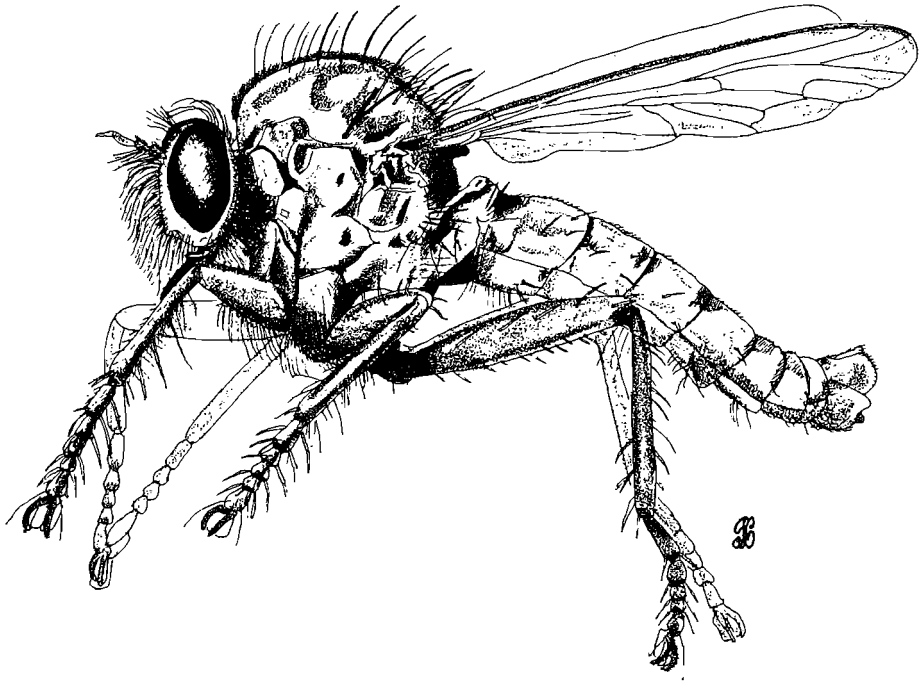


Fig. 1. Lateral aspect of *Neolophonotus albopilosus* (Ricardo, 1920).

The more important points arising from an overview of the literature are as follows.

1. Fabricius placed the first species *(suillus)* in *Dasypogon* Meigen, 1803. *Dasypogon* is a member of the subfamily Dasypogoninae which is quite distinct from the subfamily Asilinae. As the genus *Asilus* Linnaeus, 1758 was available to Fabricius it is surprising that he did not place his new species in this genus.

2. Wiedemann recognised the mistake made by Fabricius and transferred *suillus* to *Asilus*.

3. Macquart realized that the African species of *Asilus* were distinct from others of the genus and placed them in a new genus, *Lophonotus*. All but three of Macquart's eleven species now belong to *Neolophonotus*. Two of the three remaining species are now placed in genera not available at the time Macquart undertook his study. Macquart was a good and careful worker who produced excellent descriptions. It appears, however, that his publications and material were not available to a number of subsequent workers.

4. Walker, although aware of Macquart's work continued to assign species to *Asilus*, considering *Lophonotus* to be a "group" within this genus. While he named six valid species, he also created two synonyms.

5. Loew's work was sound and he produced the first key to the species of *Lophonotus*. He erected the genus *Trichonotus*, destined to be renamed *Hippomachus*, a genus still considered valid.

6. Schiner produced an excellent report on the work of Wiedemann but followed this with the description of three new taxa of which two were synonyms.

7. Hermann, Bezzi and Speiser described a few new taxa without attempting to review the group as a whole. Their material originated from rather remote places and consequently these taxa were almost invariably valid.

8. Ricardo provided the first useful overview of the whole group. She provided a key to some 36 species (some of which she had not studied herself) and described no fewer than 16 new ones, all of which are still considered valid. Why she followed Kertesz in placing all the species in *Dysmachus* Loew, 1960 is not known. *Dysmachus* is a Palaearctic genus, similar but distinct from *Lophonotus*—a taxon which had been used for some 70 years.

9. Engel discovered that the name *Lophonotus* was preoccupied and provided the new name *Neolophonotus*. Using the solid groundwork of Loew and Ricardo, Engel established five subgenera, drawing attention to the fact that the genus appeared to consist of a few reasonably distinct groups. Engel recognised the importance of the male genitalia in characterising species and did subsequent workers a great service by publishing very good drawings of most of the species available to him. Engel also discovered that Loew's name *Trichonotus* was preoccupied so provided the name *Hippomachus* to replace it. He used this name subgenerically in his 1927 paper but presumably changed his mind as he used it generically in 1929. Unfortunately Engel's formal application of subgeneric names led to considerable confusion. This confusion probably arose through a number of

contributing factors. Firstly, there was difficulty in placing some species in the subgenera, a shortcoming Engel himself recognised. Secondly, Curran (1934), without explanation, used the subgeneric name *Lophopeltis* generically; this practice Cuthbertson, probably unwittingly, perpetuated. Although Bromley (1947, 1949) applied the names as intended by Engel, Lindner (1961) confusingly used the name *Lophopeltis* both generically and subgenerically in the same paper. Lindner also used *Megadrillus* as a generic name even though Engel had quite clearly changed its status to that of a subgenus, and, even more surprisingly, used the generic taxon *Dysmachus* for *porcellus*— a species recorded by both Engel (1927) and Oldroyd (1939) as a *Neolophonotus*.

10. Cuthbertson, between 1932 and 1939, produced some interesting notes on a few species inhabiting Zimbabwe.

11. Hull (1962) stabilised the taxonomy of the group once more by providing generic and subgeneric names following an extensive study of world genera. He recognised *Megadrillus* and *Hippomachus* as full genera and retained *Lophopeltis* and *Lophybus* as subgenera of *Neolophonotus*. Hull's (1967) contribution was, however, somewhat counterproductive in that his lack of knowledge of the species was evident. His erection of four subspecies, founded on almost as many specimens, was an ill-conceived action in the light of the obvious paucity of relevant information.

12. Although Oldroyd (1963) treated Engel's subgenera as full genera he later (1974) provided keys to the genera and subgenera of what he called the *Neolophonotus* group of genera (using the arrangement suggested by Engel), but he voiced his lack of confidence in the arrangement. This lack of confidence persisted at the time he catalogued the Afrotropical Asilidae (1980). In his manuscript for the catalogue Oldroyd deliberately avoided making any decisions on the status of the various generic and subgeneric taxa associated with *Neolophonotus*. In his capacity of editor, Crosskey, however, extracted *Megadrillus* and *Antilophonotus* from Oldroyd's list of synonymy and placed them as full genera, leaving *Lophybus*, *Lophopeltis* and *Hippomachus* synonymised with *Neolophonotus*. Oldroyd was clearly aware of the urgent need for a full revision of the entire complex of genera.

In an attempt to review what Oldroyd called the *Neolophonotus* group of genera, I commenced by establishing the validity of the more obvious of the genera. I have published revisions of *Dysclytus* Loew, 1858 (1979), *Synolcus* Loew, 1858 (1980), *Dasophrys* Loew, 1858 (= *Hobbyus* Bromley, 1952) (1981) and *Hippomachus* Engel, 1927 (1983, 1985). My research on *Neolophonotus* has led me to believe that *Antilophonotus* Lindner, 1955 and *Megadrillus* Bigot, 1857 are definitely synonyms of *Neolophonotus*, and that Engel's subgenera *Lophybus*, *Lophopeltis* and *Megadrillus*, have little or no taxonomic value.

In this contribution, the first of four papers planned to cover the huge genus *Neolophonotus*, I shall discuss the methods used in the study, proceed to establish six subgroups of the genus (to be called species-groups), and deal with the three smallest of these groups.

MATERIALS AND METHODS

Specimens used in the study

Every effort was made to re-examine all previously recorded material, especially types, and as much other material as was practicable. Because the genus is primarily a southern African one a number of collecting trips were embarked upon in order to gather as much new material as possible. These trips yielded a great many specimens, many of which represent species never collected before. As a consequence, the collection of the Natal Museum is by far the most important reference source for the genus.

The museums and collections which provided specimens for study are listed below, together with the abbreviations which are to be used throughout this and other publications planned to deal with *Neolophonotus*. The names of those people who kindly assisted me with loans are given in parentheses following the particular institution involved. My thanks are extended to all these people without whose assistance this study would not have been possible.

AM = Albany Museum, Grahamstown, South Africa (Dr F. Gess).
AMNH = American Museum of Natural History, New York, U.S.A. (Dr P. Wygodzinsky)
BM = British Museum (Natural History), London, United Kingdom (Mr J. Chainey).
CAS = California Academy of Sciences, San Francisco, U.S.A. (Dr P. Arnaud).
DM = Durban Museum, Durban, South Africa (Mr C. Quickelberge).
HEC = Hope Entomological Collections, University Museum, Oxford, United Kingdom (Dr M. Graham).
KMT = Koninklijk Museum Voor Midden-Africa, Tervuren, Belgium (Dr J. Decelle).
MCZ = Museum of Comparative Zoology, Cambridge, U.S.A. (Ms M. Thayer).
MNP = Muséum National D'Histoire Naturelle, Paris, France (Dr L. Tsacas).
MZF = Museo Zoologica de 'La Specola', Firenze, Italy (Ms S. Mascherini).
NCI = National Collection of Insects, Pretoria, South Africa (Dr M. Mansell).
NM = Natal Museum, Pietermaritzburg, South Africa.
NMB = National Museum, Bloemfontein, South Africa (Mr S. Louw).
NMW = Naturhistorisches Museum Wien, Wien, Austria (Dr R. Contreras-Lichtenberg).
NMZ = National Museum, Bulawayo, Zimbabwe (Dr E. Pinhey).
NRS = Naturhistoriska Riksmuseet, Stockholm, Sweden (Dr P. Persson).
PPRI = Plant Protection Research Institute, Harare, Zimbabwe (Dr B. Blair).
SAM = South African Museum, Cape Town, South Africa (Dr V. Whitehead).
SMS = Staatliches Museum fur Naturkunde Stuttgart, Stuttgart, W Germany (Dr B. Herting).
SMW = State Museum, Windhoek, Namibia (Dr M-L. Penrith).

ZMB = Zoologisches Museum, Berlin, E Germany (Dr H. Schumann).
ZMC = Zoologisk Museum, Copenhagen, Denmark (Dr L. Lyneborg).
ZML = Zoological Museum, Department of Zoology, Lund, Sweden (Dr R. Danielsson).
ZSM = Zoologische Staatssammlung, München, W Germany (Dr F. Reiss).

Preparation of specimens for study

In all instances specimens were dry-mounted on pins. Wings were in some instances removed for photography. If this was done the right wing was chosen provided it was in good condition. The wing was cut off using microscissors, photographed and reattached to the specimen with a tiny blob of clear nail-varnish. Care was taken not to allow the varnish to obliterate any important anatomical features.

Male genitalia are crucial in the identification of species. Detailed drawings (using a drawing-tube) were executed after first removing the terminal segments from the specimen and clearing them in hot potassium hydroxide. The genitalia were then mounted on a small piece of transparent cellulose using Canada Balsam, and attached to the pin of the specimen concerned.

Preparation of descriptions

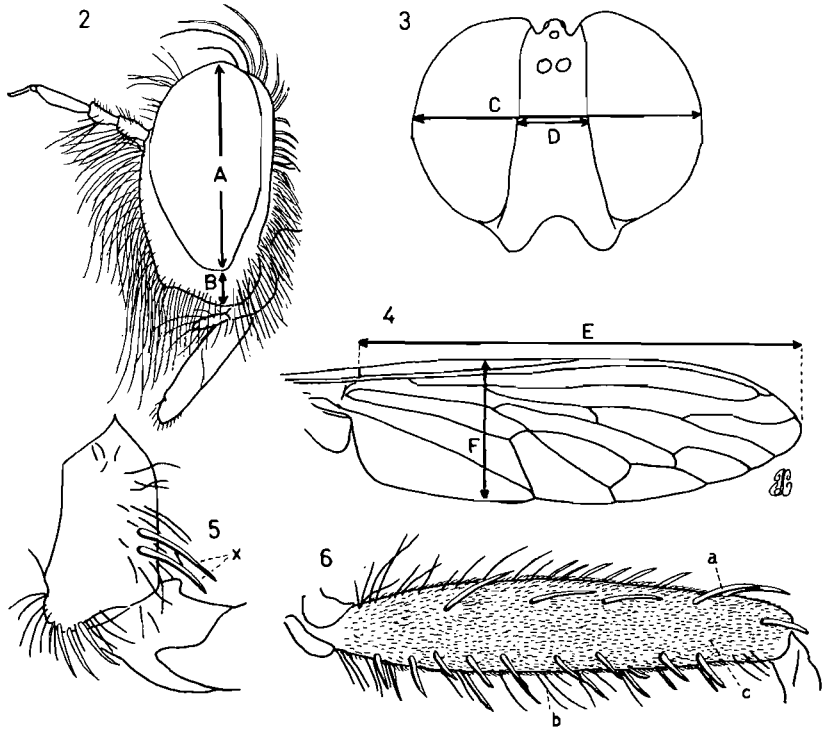
During preliminary examination of a number of different species of *Neolophonotus*, potentially useful morphological features were identified as worthy of recording for use in the characterisation of species. A standard form was devised and completed for each holotype (or other reference specimen) studied. Information on these forms was then used to draw up the final description of each species for publication. The following anatomical information was recorded.

Head:

Colour of antenna; colour of antennal bristles and setae; colour of mystax; colour of occipital setae in upper, central and lower regions (head viewed laterally—see Fig. 2); colour of proboscis and palpi; width of head to width of face ratio (measurements taken as indicated in Fig. 3); eye height to depth of lower facial margin ratio (measurements taken as shown in Fig. 4).

Thorax:

Colour of katatergal (ktg s) and metanepisternal setae (mtanepst s); number and colour of acrostichal bristles (acr); approximate number and colour of dorsocentral bristles (dc); colour of postpronotal setae (pprn); number and colour of notopleural (npl), supra-alar (spal) and postalar (pal) bristles on both left and right sides of body (2/3 means 2 on left and 3 on right); number and colour of bristles on margin of scutellum; number and colour of bristles, and colour of setae on disc of scutellum; colour and development of mane; wing length (measured from humeral crossvein to tip) and breadth (measured through first fork of radial sector) (Fig. 4); wing colour and presence of characteristic markings; colour of bristles and setae on anterior aspect of prothoracic coxa (cx1); number and colour of bristles (if present) on the lateral aspect of the metathoracic coxa (cx3) Fig. 5; colour and development of bristles and setae of metathoracic femur (divided into bristles, long setae and short setae—see Fig. 6); leg coloration.



Figs 2–6. Anatomical features of *Neolophonotus*. 2–3. Aspects of head showing measurements taken in the calculation of the 'eye height (A):depth of lower facial margin (B) ratio' and the 'width of head (C):width of face (D) ratio'. 4. Wing showing how length (E) and breadth (F) were measured. 5. Outer aspect of left metacoxa showing lateral bristles (x). 6. Outer aspect of left metathoracic femur showing bristles (a), long setae (b) and short setae (c).

Abdomen:

General coloration and pruinosity (is representative of specimen as a whole); number and colour of discal and marginal bristles, and colour of fine setae found on third tergite (T3); number and colour or bristles and colour of fine setae found on third sternite (not normally recorded in final descriptions); notes relating to the form of the male and/or female genitalia.

Descriptions given in this paper are usually those of holotypes (or lectotypes), and usually refer to the male sex. If other specimens show important departures these are mentioned.

Specific identifications are based almost entirely on the male genital organs and for this reason every description is accompanied by illustrations of the male genitalia in dorsal, lateral and ventral view. In a few instances (usually when these views are inadequate) details of the aedeagus are illustrated separately.

Recording of material examined

An attempt has been made to adopt a standard method for the recording of material examined. The following information, if available, is recorded for each

locality: number and sexes of specimens in the series (? denotes specimens lacking genitalia and therefore of unknown sex); type status (if appropriate); place of capture (followed by quarter-degree grid reference—unless actual coordinates are available); date of collection (month given in roman numerals); name of collector (christian name or initials usually excluded); any additional information (includes altitude, or information about the site of collection, if available); abbreviation of museum where specimens are housed (if two repositories are given the more important one is given first).

Analysis of distribution

Usher (1972) analysed tabanid distribution by reference to the main climatological regions defined by Schulze (1965). I have followed her by attempting to analyse *Neolophonotus* distribution in the same way and have found these climatological regions to have value. I have used Schulze's map (also published by Usher) and the same region names and abbreviations (Fig. 7). I have, however, combined some of the regions which were divided purely by political boundaries (thus SWAs + W = W; SWAn + B = B; Sn + Ss = S). It seems likely that some of these regions (particularly W) probably comprise two or three reasonably distinct

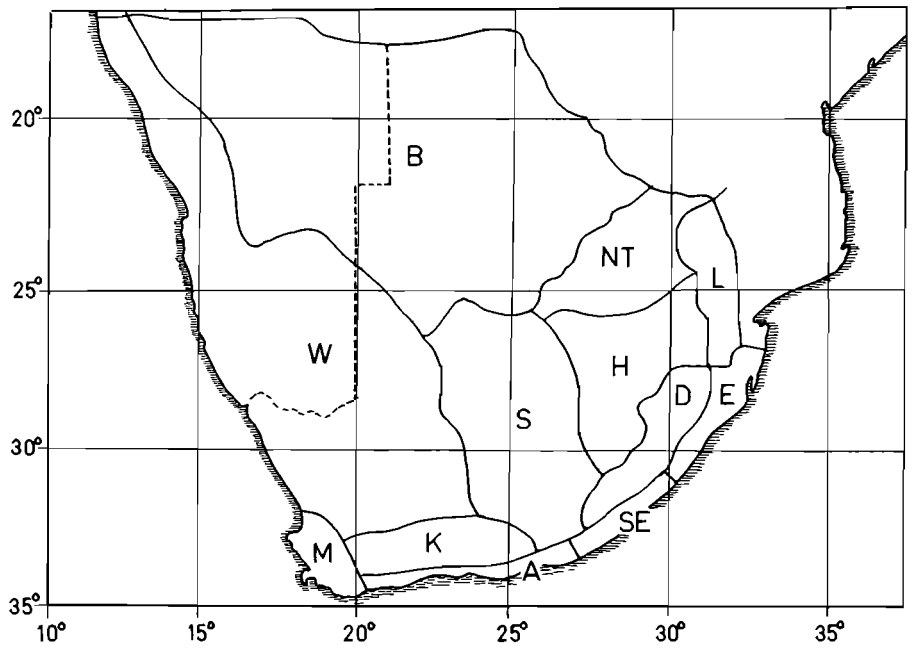


Fig. 7. Map of southern Africa showing the main climatological regions (adapted from Schulze 1965).

M—Mediterranean	A—S Cape Coastal
K—Little & Great Karoo	W—Desert & Poor Steppe
S—S and N Steppe	SE—SE Cape Coastal
E—Subtropical	D—Drakensberg
L—Transvaal Lowveld	H—Highveld
NT—N Transvaal	B—Botswana & N Namibian

subregions (the Namaqualand area may be just such a subregion) but for the purposes of this paper such subregions have not been considered.

TAXONOMY

Neolophonotus Engel, 1925

Lophonotus Macquart 1838:125 [1839:214]. Type species: *Lophonotus auribarbis* Macquart, 1838 [= *Dasypogon suillus* Fabricius, 1805:168], by designation Coquillett (1910:562). [Junior homonym, preoccupied *Lophonotus* Stephens, 1829]

Megadrillus Bigot, 1857:545. Type species: *Lophonotus heteronevrus* Macquart, 1838, by original designation.

Neolophonotus Engel, 1925:347. Replacement name for *Lophonotus* Macquart.

Lophybus Engel, 1925:348 (as subgenus of *Neolophonotus*). Type species *Lophonotus melanolophus* Loew, 1858, by original designation.

Lophopeltis Engel, 1925:348 (as subgenus of *Neolophonotus*). Type species *Lophonotus comatus* Wiedemann, 1821, by original designation.

Antilophonotus Lindner, 1955:38. Type species *Antilophonotus maculipennis* Lindner, 1955, by monotypy. **Syn. n.**

Note: Coquillett (1910:562) designated Macquart's first species *(auribarbis)* as type of *Lophonotus*. He noted that *auribarbis* was a synonym of *Asilus chalcogaster*. In the present study it will be demonstrated that *chalcogaster* is in turn a synonym of *Dasypogon suillus* (the oldest name presently known in *Neolophonotus*).

Synonymy of genera and subgenera

Because of the nomenclatural confusion which has existed in the literature relating to *Neolophonotus*, one of my first tasks was to establish the validity of all the names used by previous authors. After having studied virtually all the available material I now believe that I am in a position to make some definite decisions on the value of previous arrangements and offer alternative ideas which may have greater merit in future studies.

Supraspecific taxa used by previous workers

Dasypogon Meigen, 1803.

As already mentioned, Fabricius placed what was destined to become the first described species of *Neolophonotus* in the genus *Dasypogon*. This was not the best choice available to him at the time; *Asilus* would have been better. The genus *Dasypogon* is a member of the subfamily Dasypogoninae, and does not occur in the Afrotropical Region. This fairly large subfamily (as defined by Papavero 1973) is represented in this region by only three genera (*Pegesimallus*, *Saropogon* and *Caroncoma*) none of which bear any resemblance to *Neolophonotus*. Of interest is the fact that Hull (1962) listed 13 species of so-called *Dasypogon* from the Ethiopian Region. Oldroyd (1980) mentions only 10 of these, eight of which were merely listed as 'Unplaced species of Dasypogoninae' (the other two being listed under *Scylaticus* and *Sisyrnodytes* respectively). Since the list of unplaced species was published I have discovered the true identities of another two of them: *D. torridus* is a synonym of *D. aulicus* (now known to be a *Pegesimallus*—see Londt 1980); *D. scapularis* actually belongs to *Gonioscelis* (a genus still to be revised) and so the **new combination**—*Gonioscelis scapularis* (Macquart, 1838)—is here proposed.

Asilus Linnaeus, 1758.

This name was used by Wiedemann and Walker. The genus is now restricted to the Palaearctic Region. Oldroyd (1980) lists ten species in the Afrotropical Catalogue but states that these need to be restudied in order to establish their generic allocation. Although I am of the firm opinion that no true *Asilus* species occur in the Afrotropical Region, I attempted to trace the types of the species listed by Oldroyd in order to establish whether or not they belong to *Neolophonotus*. Unfortunately all but one of the types appear to be lost. The following notes resulted, primarily from a study of the original descriptions.

A. albitarsatus Macquart, 1834, *rubripes* Macquart, 1834 and *scutellatus* Macquart, 1834 are entered in the catalogue under both *Asilus* and *Promachus*. The types of all three cannot be found. For the present I cannot comment on these species but have informed Dr P. Blasdale of the problem in the hope that he will be able to throw further light on the subject during his study of *Bactria* and *Promachus*.

A. dioctriaeformis Macquart, 1846. I have traced the holotype male to the MNP and can state that the species actually belongs to the tribe Ommatiini (probably genus *Ommatius*).

A. forficula Macquart, 1846. The holotype cannot be traced. The description suggests that the species may belong to *Neomochtherus*.

A. gabonicus Macquart, 1855. The holotype cannot be traced. The description does not provide much assistance in determining to which genus this species should be assigned but I am reasonably sure that it is not *Neolophonotus*.

A. incisuralis Macquart, 1838. This entry is repeated in the Afrotropical Catalogue under *Synolcus* (how this synonymy was established is not known). The type cannot be found. Macquart states that the species has a dilated wing which indicates that it belongs to one of three Afrotropical genera—*Synolcus*, *Dasophrys* or *Hippomachus*. For the present all that can be said with certainty is that the species is not an *Asilus* nor a *Neolophonotus*.

A. natalicus Macquart, 1855 and *nigribarbis* Macquart, 1846. The types cannot be found. The descriptions offer no obvious clues to their probable generic identities. I would tentatively suggest that both species may belong to *Dasophrys* or *Synolcus*.

A. schedius Walker, 1849. The type cannot be traced. Walker's description suggests that the species may belong to *Promachus* or *Bactria*. Walker described a number of other species of *Asilus* which have subsequently been placed in these genera.

Although very little evidence is available I am prepared to accept that none of the catalogued species of *Asilus* actually belongs to this genus. I also suggest that none of them belongs to *Neolophonotus*.

Lophonotus Macquart, 1838 and *Trichonotus* Loew, 1858.

These genera pose no problems. Both names were preoccupied and Engel provided the new names *Neolophonotus* and *Hippomachus* respectively.

Megadrillus Bigot, 1857.

The single character used to characterise this taxon is a closed r_5 (first posterior) cell. This is an unreliable character and I therefore consider *Megadrillus* to be a synonym of *Neolophonotus*.

Dysmachus Loew, 1860.

Kertesz (1909), for unstated reasons, assigned all the species previously placed in *Lophonotus* to *Dysmachus*. This name was subsequently applied by a number of workers, primarily Ricardo, but was justifiably discarded by Engel (1925). *Dysmachus* is a Palaearctic genus. Hull (1962) listed two Neotropical representatives (*americanus* Macquart, 1846 and *strigitibia* Curran, 1931), one of which *(americanus)* I have discovered is a synonym of *Neolophonotus suillus* and therefore is incorrectly placed.

Lophopeltis Engel, 1925 and *Lophybus* Engel, 1925.

After studying 31 species of *Neolophonotus*, Engel concluded that the genus should be divided into five subgenera.

Hippomachus. Engel keyed this subgenus out first, probably because it was the most clearly defined group. At the time there was only a single species *(pegasus)* which possessed both a well-developed mane (a feature associated with *Neolophonotus*) and an expanded wing in the male sex (found in *Dasophrys* and *Synolcus* but not in *Neolophonotus*). With the discovery of a number of other species with this same combination of characters, I am now of the firm belief that the group is sufficiently distinctive to be considered a full genus as originally suggested by Loew when he first described it (as *Trichonotus*). Apart from the morphological characters mentioned above, the species share a common lifestyle in that they are arboreal. This feature suggests a closer relationship to *Dasophrys* and *Synolcus* than to *Neolophonotus*.

Megadrillus. As already stated, I shall be presenting evidence to support my conclusion that the closed condition of cell r_5 is not a reliable feature upon which to base a genus-group taxon. The species which demonstrate this character (not always consistently) are clearly closely related to certain other species which do not. I therefore consider *Megadrillus* as a synonym of *Neolophonotus*.

Neolophonotus s.s. The lack of well-developed abdominal bristles and the flattened nature of the female ovipositor were the two main features used to characterise this subgenus. Engel placed 12 of the species known to him in this group. There was a problem in that *robustus* had also to be included in the key to species of *Lophybus* because of the presence of bristle-like setae on the first few abdominal tergites. The results of my work on the genus indicate that this subgroup is indeed a distinctive one (my *suillus* species-group) and can be reasonably well defined using a combination of characters (a few of which have not been recognised before). Because Engel's other subgenera lack the distinctive character of *Neolophonotus s.s.* (and because I do not believe that the system I propose to adopt is altogether natural) I have abandoned the formal use of subgeneric names. So,

although Engel's subgenus *Neolophonotus* is a reasonably distinctive one, I prefer to consider it as a species-group.

Lophybus. A survey of the six species making up Engel's subgenus *Lophybus*, in the light of more recent knowledge, is interesting. Firstly, both *flavopilosus* and *tarsalis* are now known to belong to *Dasophrys*, and indeed *flavopilosus* is now thought to be a synonym of *tarsalis* (Londt 1981). Secondly both *dispar* and *robustus* were problem species even at the time Engel proposed his classification. Both these species had to be included in keys to species of other subgenera (*robustus* in both *Neolophonotus s.s.* and *Lophybus*; *dispar* in both *Lophybus* and *Lophopeltis*). The two remaining species, *congoensis* and *melanolophus*, differ from one another and I propose to separate them in two different species-groups. It is therefore clear that Engel's group was not a natural one and so I have decided to abandon it in the synonymy of *Neolophonotus*.

Lophopeltis. Engel placed 12 species in this subgenus. The feature used to bring them together was the presence of well-developed bristles on both the tergites and sternites of the abdomen. Engel's subgenus includes groups of species which are clearly unrelated. For example, *nigripes*, *angustibarbus*, *albopilosus* and *rapax* are rather bare species, lacking well-developed manes but possessing hairy postpronotal lobes, whereas *setiventris*, *spiniventris*, *molitor*, *pellitus*, *albofasciata* and *pulcher* are bristly species with bare postpronotal lobes. The genotype named by Engel was *comatus* (not *erythracanthus* as given in the Afrotropical Catalogue), which together with *wroughtoni* is rather different from all the other species placed in the subgenus. I propose to abandon the taxon *Lophopeltis* for the same reasons given for abandoning *Neolophonotus s.s.* and *Lophybus*.

Antilophonotus Lindner, 1955.

I have studied the holotype of *maculipennis*, the only species assigned to the genus by Lindner. The features given by Lindner, and translated into English by Hull (1962), cannot be considered sufficiently distinctive. I consider *Antilophonotus* to be a synonym of *Neolophonotus* (*maculipennis* is closely related to *vansoni* and is to be placed in my *pellitus* species-group).

Although I have decided to abandon the subgenera recognised by Engel and other subsequent workers, I am aware that *Neolophonotus* is composed of a number of groups of related species. Some of these groups are reasonably well defined while others are not. The taxonomy of the genus is based very largely on male genital characteristics and most of the species-groups can be loosely defined using similarities evident in these organs. After a number of attempts to arrange the species in clearly defined groups, using genital characters, I eventually decided to admit defeat and merely present a rather unnatural but useful means of arranging the species into groups. These groups, based entirely on a few easily observed features, appear to be convenient in that members of what can be called 'natural' groups tend to fall together. I have decided that my groups should not be ranked as subgenera as this might cause unnecessary confusion in future studies of the genus. Instead I shall call these divisions species-groups on the understanding that I do not necessarily imply that species included in the same group are closely related phylogenetically (although I believe that in many instances they are).

Key to the species-groups of *Neolophonotus*

The names used for the species-groups are the names of the oldest known species in each group.

1 Metathoracic coxa bears at least one (often more) strong bristle laterally in addition to fine setae; postpronotal lobe with or without setae 3
— Metathoracic coxa with fine setae only; postpronotal lobe always with setae 2

2 Mane well developed, unicolourous black along entire length (may be bordered by smaller pale coloured setae); setae of mane longish and arranged loosely or as a tightly packed row ..... **suillus** group.
— Mane usually weakly developed or absent anteriorly, and with only weak, loosely arranged, usually pale coloured setae (rarely absent) in posterior part; if mane is well developed it is also bicoloured (black anteriorly, pale yellow or white posteriorly) ..... **angustibarbus** group.

3 Postpronotal lobes bear a number of fine setae or bristles 4
— Postpronotal lobes bare (rarely one sex may possess 1–3 isolated, erect setae) 5

4 Mane usually well developed, black (may be bordered by pale setae) along entire length (exceptions have white setae anteriorly and black setae posteriorly) ..... **comatus** group.
— Mane white or bicoloured (black setae anteriorly and white setae posteriorly) **chionthrix** group.

5 Mane black along entire length (often bordered by shorter pale setae) ..... **squamosus** group.
— Mane bicoloured (black anteriorly and white or yellow-white posteriorly) or white along entire length ..... **pellitus** group.

Neolophonotus species not covered in this study

Oldroyd (1975 1980) listed 12 species of *Neolophonotus* which are not included in the present study. The reasons for their exclusion are given below.

1. *albibarbis* Macquart, 1846:215 *(Lophonotus)*—The holotype female, from the Cape, is to be found in the HEC. The species is here transferred to the genus *Neomochtherus* (**comb. n.**).

2. *albiciliatus* Loew, 1854:6 *(Lophonotus)*—Loew's types, from Egypt, cannot be traced. The description suggests that this may well be a valid species of *Neolophonotus* although both Hull (1962) and Efflatoun (1934) place the species in *Dysmachus*.

3. *breonii* Macquart, 1838:129 *(Lophonotus)*—Macquart's holotype male, without locality data, is in the MNP. Although the specimen is in poor condition I can report that it does not belong to any known Afrotropical genus of Asilini. The specimen will require further study in order to establish its true generic identity. I tentatively suggest that it may be a *Dysmachus*.

4. *dubius* Bezzi, 1892:187 *(Lophonotus)*—The holotype female, from Somalia, cannot be found. Bezzi expressed doubt that this species was correctly placed in this genus and his description supports his doubts. Statements about the antenna, abdominal coloration and wing venation suggest that this species does not belong to *Neolophonotus*.

5. *geniculatus* Macquart, 1838:129 *(Lophonotus)*—Londt (1981) has demonstrated that this is a valid species of *Dasophrys*.

6. *indicus* Bromley, 1935:222 *(Neolophonotus)*—I have not been able to locate the holotype female of this Indian species. Oldroyd (1975) listed the species in the Oriental catalogue and expressed doubt concerning its allocation to this genus. I share his doubt.

7. *ladon* Walker, 1849:312 *(Asilus)*—Walker's holotype female, without locality data, is in the BM. The specimen is in poor condition. Walker gave no indication of where the specimen had been collected and so the locality of 'South Africa' in the catalogue is probably without foundation. I strongly suspect that the species should be assigned to *Dysmachus* and should be considered not Afrotropical.

8. *leucotaenia* Bezzi, 1906:286 *(Lophonotus)*—I cannot locate Bezzi's type male from Eritrea. The species is almost certainly correctly placed in *Neolophonotus* but I have not seen an authentic specimen. Although Ricardo (1920) recorded this species from Zimbabwe and South Africa (Transvaal and Natal), these records are incorrect.

9. *macropterus* Loew, 1854:7 *(Lophonotus)*—Loew's male and female types from 'Nubien' (Sudan) cannot be traced. The description suggests that the species may be a *Neolophonotus* but I have not seen anything which could be conspecific. Hull (1962) places it in *Dysmachus* and, for the present, I accept this assignment.

10. *mivatus* Walker, 1871:259 *(Asilus)*—Londt (1983) has demonstrated that this is a valid species of *Hippomachus*.

11. *pagasus* Loew, 1858:365 *(Trichonotus)*—Londt (1983) has assigned this species to *Hippomachus*.

12. *tarsalis* Ricardo, 1920:3 *(Dysmachus)*—Londt (1981) has demonstrated that this is a valid species of *Dasophrys*.

The *Neolophonotus chionthrix* species-group

This is a fairly distinctive group of species found primarily in the dry 'Desert and Poor Steppe' regions of South Africa (Table 1). Of the 17 identified species only five are known outside this large climatic region (two from the 'Mediterranean region' of the south-west Cape and two from the Northern Namibia/Botswana region). Most of the species appear to have adults which are active during spring and early summer (ie. August–November).

The group appears to be a reasonably natural one (ie. the species are probably closely related phylogenetically) and is characterised by the following combination of characters: The metacoxae (cx3) possess at least one well-developed bristle laterally; the postpronotal lobes are equipped with well-developed setae; the mane

TABLE 1

The distribution and seasonal incidence of species belonging to the *Neolophonotus chionthrix* species-group.

Species	Distribution (Climatic regions)													Seasonal incidence (Months of the year)										
	M	A	K	W	S	SE	E	D	L	H	NT	B	Z	J	F	M	A	M	J	J	A	S	O	N	D
acuminatus	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—
agrestis	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	*	*	—
aktites	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	*	*	—
amplus	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	*	—
anguicolis	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—
chionthrix	—	—	*	*	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	*	*	*	—
coetzeei	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—	*	—	—	*	—	—	—	—	—
crassicolis	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—
crenulatus	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—
expandocolis	—	—	*	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	*	—	—
leucothrix	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—	*	—	—	—	*	—	—	—	—	—
macrocercus	—	—	—	*	—	—	—	—	—	—	—	—	—	no data											
milleri	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	*	*	—
namaqua	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	*	—	—
namibiensis	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—
obtectocolis	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—
robertsoni	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—

Abbreviations:

M — Mediterranean region of south-western Cape.
A — Southern Cape Coastal region.
K — Little and Great Karoo region.
W — Desert and Poor Steppe region.
S — Southern and Northern Steppe regions.
SE — South-eastern Cape Coastal region.
E — Subtropical region.
D — Drakensberg region.
L — Transvaal Lowveld region.
H — Highveld region.
NT — Northern Transvaal region.
B — Botswana and Northern Namibian region.
Z — Localities north of South Africa and Namibia.

is usually well developed along its entire length and is always pale yellow or white postsuturally. The genitalia of males in this group demonstrate certain similarities. The epandrial lobe is usually simple in structure and often bears a cluster of fine, darkly coloured setae on the inside surface of the tip. The aedeagus is frequently rather complex, possessing dorsal and/or lateral spine-like projections. The style is usually moderately long. A few of the species presently contained in this group may eventually prove to be more closely related to species in other groups (eg. *amplus*, *macrocercus*, *namibiensis*, *robertsoni*). For the present, however, it is convenient to regard them as members of this group because they share a number of features in common with the other species.

Members of the *chionthrix* group tend to be rather small (average wing-length is about 6,5 mm). The smallest species is *macrocercus* (wing-length *ca.* 4 mm) and the largest is *amplus* (wing length *ca.* 11 mm). The rather limited information relating to the habits of the species suggests that they all commonly rest on the ground (or on rocks and stones) in open situations.

Key to the species of *Neolophonotus chionthrix* species-group (males only)

1 Disc of scutellum with well-developed bristles amongst fine setae 2
— Disc of scutellum with fine setae only 7

2 Acrostichal bristles not differentiated; setae of metanepisternum, postpronotal lobe, mystax and scutellar disc yellow 3
— Acrostichal bristles well developed, black; setae listed above mostly white, black or black and white mixed 4

3 Mane short black anteriorly; dorsocentral bristles extend anteriorly of transverse suture; bristles of scutellar disc black ..... **anguicolis** sp. n.
— Mane absent anteriorly; dorsocentrals only present postsuturally; scutellar disc bristles yellow ..... **amplus** sp. n.

4 Anterior face of fore femur lacks clearly differentiated bristles; setae of metanepisternum and postpronotal lobe white 5
— Anterior face of fore femur with short yellow bristles; setae of metanepisternum and postpronotal lobe black and white mixed 6

5 Male genitalia as in Figs 41–43 ..... **leucothrix** sp. n.
— Male genitalia as in Figs 27–29 ..... **coetzeei** sp. n.

6 Mystax composed of black and white setae mixed; bristles of scutellar disc and margin black ..... **robertsoni** sp. n.
— Mystax uniform white (few dark bristles on lower facial margin only); bristles of scutellum white ..... **namibiensis** sp. n.

7 Third abdominal tergite (T3) with well-developed marginal bristles 10
— T3 lacking clearly differentiated marginal bristles 8

8 Metanepisternal setae all black; scutellar disc setae and short bristles of anterior surface of fore femur all white. ..... **crenulatus** sp. n.
— Metanepisternal setae black and yellow mixed; scutellar disc setae black and yellow; bristles of anterior face of fore femur yellow 9

9 Male genitalia as in Figs 11–13 ..... **agrestis** sp. n.
— Male genitalia as in Figs 47–49 ..... **milleri** sp. n.

10 Metanepisternal setae uniform white, yellow or black 11
— Metanepisternal setae mixed black and white or black and yellow 14

11 Metanepisternal setae and small bristles of anterior face of fore femur black **obtectocolis** sp. n.
— Metanepisternal setae yellow and white; small bristles of anterior face of fore femur, when present, white or yellow 12

12 Fore femur lacks differentiated bristles on anterior face; empodia clearly shorter than pulvilli ..... **macrocercus** sp. n.
— Fore femur with a small white bristle on anterior face; empodia as long as or longer than pulvilli 13

13 Proclinate bristles of upper occiput predominantly black .... **chionthrix** Hull
— Proclinate bristles of upper occiput predominantly yellow **acuminatus** sp. n.

14 Abdominal tergites with all fine setae white or yellow; mystax in central part with only yellow setae ..... **namaqua** sp. n.
— Abdominal tergites with some black setae dorsally; mystax with black and yellow or black and white setae centrally 15

15 Postsutural setae of mane clearly orange ..... **aktites** sp. n.
— Postsutural setae of mane white 16

16 Bristles of hind femur predominantly black ..... **crassicolis** sp. n.
— Bristles of hind femur predominantly white ..... **expandocolis** sp. n.

Neolophonotus acuminatus sp. n.

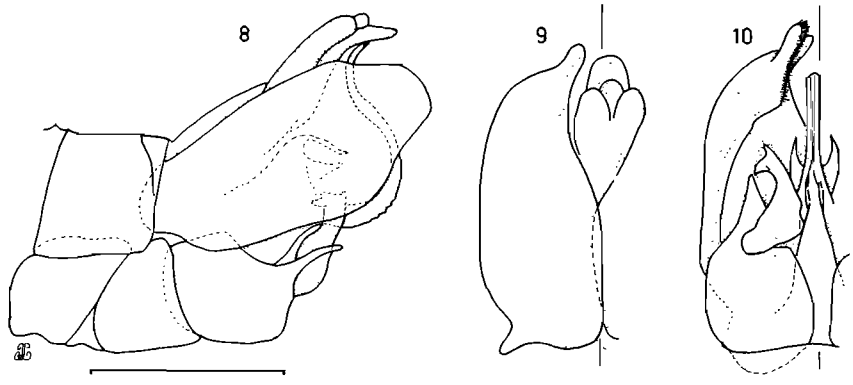
Figs 8–10

Etymology: L. *acuminatus* = pointed. Refers to the pointed apex of the male gonocoxite.

Description: Based on holotype ♂.

Head: Scape and pedicel brown; rest dark red-brown to black; scape with yellow-white setae, pedicel with a few dark red-brown setae amongst yellow-white ones. Eye:face ratio 1:0,21; eye:lower facial margin ratio 7,4:1. Mystax yellow-white. Occipital setae: upper—yellow (a few dark red-brown); central—yellow; lower—white. Proboscis and palpi dark red-brown.

Thorax: ktg s and mtanepst s white. Mesonotal setae: acr short, dark red-brown; dc black, *ca.* 6 pairs, a few anterior of suture; pprn recumbent, white; 3/3 yellow npl; 2/2 black spal; 1/1 black pal accompanied by 1 or 2 smaller pale yellow bristle-like setae; mane weak dark red-brown anteriorly (bordered with short white setae), sparse white behind suture. Scutellum with 6 marginal bristles (3 black, 3 white); disc with white setae only. Wing: 6,7 × 2,1 mm; membrane transparent and colourless. Legs: femora dark red-brown, rest orange-brown; cx1 with white bristles and setae anteriorly; cx3 with 1 white bristle laterally. Hind femur: all bristles and setae white.



Figs 8–10. *Neolophonotus acuminatus* sp. n. holotype male genitalia. 8. Lateral. 9. Dorsal. 10. Ventral.

Abdomen: Dark red-brown, silver-gold pruinose. T3 with 4 white marginal and 1–2 white discal bristles; all fine setae recumbent white. Genitalia as in Figs 8–10; gonocoxite with a long pointed process distally; aedeagus complicated, with dorsal trifurcate process and ventral elongate, sinuous penisfilum.

Paratypes: 10 ♂ 7 ♀ similar to holotype.

Material examined: SOUTH AFRICA: *Cape Province*: 11 ♂ (holotype & paratypes) 7 ♀ (paratypes), Tankwa Karoo, Renoster Riv. (*ca.* 3220AC), xi.1952, Mus. Exp. (SAM, NM). SAM Type Nos 3873 (holotype) 3874 (paratypes) NM Type No. 2965.

Distribution: Desert and Poor Steppe region of the south-western Cape Province.

Neolophonotus agrestis sp. n.

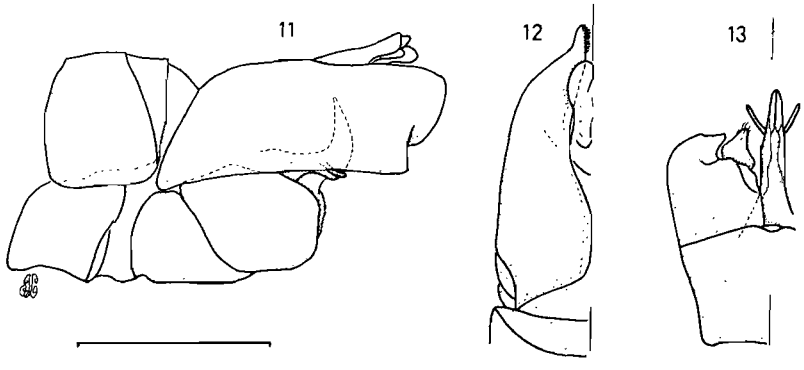
Figs 11–13

Etymology: L. *agrestis* = of the country, rustic. Refers to the remoteness of the area in which the species was collected.

Description: Based on holotype ♂.

Head: Antenna dark red-brown; setae of scape and pedicel dark red-brown dorsally, dark red-brown and white ventrally. Eye:face ratio 1:0,21; eye:lower facial margin ratio 8,6:1. Mystax yellow-white but with a few black setae on lower facial margin. Occipital setae: upper—long, black, proclinate; central—yellow and black; lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s black (a few yellow). Mesonotal setae: acr long, black; dc black, *ca.* 6 pairs a few anterior of suture; pprn longish, black and white; 3/2 black npl; 2/2 black spal; 1/1 black pal; mane weak black anteriorly (bordered with short white setae), white behind suture. Scutellum with 4 black, marginal bristles; disc with long, black and white setae. Wing: 6,1 × 2,0 mm; membrane transparent and colourless. Legs: dark red-brown, proximal parts of tibiae yellow-brown; cx1 with white bristles and setae anteriorly; cx3 with 1–2 white bristles laterally. Hind femur: bristles yellow (few with brownish tinge), long setae mostly brown (few white), short setae white.



Figs 11–13. *Neolophonotus agrestis* sp. n. paratype male genitalia. 11. Lateral. 12. Dorsal. 13. Ventral.

Abdomen: Dark red-brown, red-gold pruinose. T3 lacking both marginal and discal bristles; all fine setae white, except for a few black ones dorsally on posterior margin. Genitalia as in Figs 11–13; epandrial lobes simple in structure with upper and lower margins almost parallel in lateral view. Aedeagus shortish with a strongly upturned tip and a pair of filamentous lateral projections subapically.

Paratypes: 57 ♂ 45 ♀ 1? similar to holotype.

Material examined: SOUTH AFRICA: *Cape Province:* 3 ♂ (holotype & paratypes) 5 ♀ (paratypes), 7 mi NE Garies (3018CA), 9.ix.1972, Irwin, 950 ft, sandy hillside with flowing stream (NM); 1 ♂ 1 ♀ (paratypes), Garies (3017DB), 9.ix.1972, Irwin, 640 ft (NM); 1 ♂ 1 ♀ (paratypes), Studer's Pass, Wolfhoek (3018AC), 13.xi.1982, Schoeman (NM); 6 ♂ 4 ♀ (paratypes), 25 km N Kamieskroon (2917DD), 5.ix.1983, Stuckenberg & Londt, rocky hillside vegetation (NM); 4 ♂ (paratypes), Aninaus Pass (2917BA), 15 km W Steinkopf, 4.ix.1983, Londt & Stuckenberg, rocky hillside and dry river (NM); 4 ♂ (paratypes), Studer's Pass, 22 km NE Garies (3018AC), 6.ix.1982, Londt & Stuckenberg, stream edge and rocky slopes (NM); 8 ♂ 1 ♀ (paratypes), 10 km E Garies (3018CA), 6.ix.1983, Stuckenberg & Londt, rocky slopes/bushes (NM); 4 ♂ 12 ♀ (paratypes), Bowesdorp (now Kamieskroon 3017BB) Namaqualand, ix.1941, Mus Staff (SAM); 14 ♂ 10 ♀ (paratypes), between Kamieskroon and Springbok, x.1939, Mus Staff (SAM); 1 ♂ (paratype), Aggenys (2918BB) or Bushmanland between Springbok and Pella, x.1939, Mus Staff (SAM); 1 ♂ (paratype), Garies (3017DB), 3.x.1974 (SAM); 8 ♂ 4 ♀ (paratypes), Bowesdorp (now Kamieskroon 3017BB), xi.1931, Mus. Staff (SAM); 3 ♂ 7 ♀ (paratyes), Klip Vlei, Garies (3017DB), xi.1931, Mus. Staff (SAM); 1 ♂ (paratype), Kamieskroon, ix.1936, Mus Staff (SAM); 1 ♀ (paratype), Springbok (2917DB), xi.90, Lightfoot (SAM); 1? (paratype), Outiep, Garies (3017DB), ix.1953, du Toit (SAM). NM Type No. 2966. SAM Type No. 3882 (paratypes).

Distribution: Namaqualand (north-east Cape Province) area of Desert and Poor Steppe region.

Neolophonotus aktites sp. n.

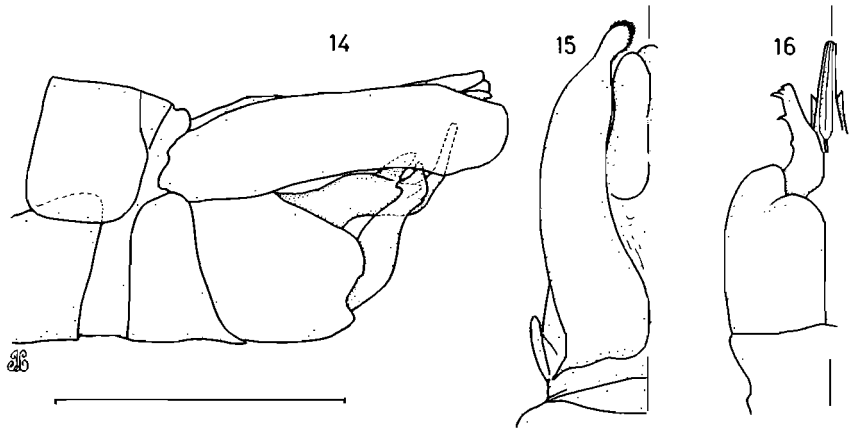
Figs 14–16

Etymology: L. *aktites* = shore or coast dweller. Refers to the fact that the species has been collected on coastal dunes.

Description: Based on holotype ♂.

Head: Antenna dark red-brown; scape and pedicel with black setae (a few yellow on ventral aspect of scape). Eye:face ratio 1:0,21; eye:lower facial margin ratio 8,8:1. Mystax yellow except for a few white setae bordering central part and a few black setae just below antennal bases and along lower facial margin. Occipital setae: upper—black; central—orange; lower—white (slight yellow tinge). Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s black and orange. Mesonotal setae: acr long, black; dc black, *ca.* 6 pairs, a few anterior of suture; pprn longish orange (a few black); 3/3



Figs 14–16. *Neolophonotus aktites* sp. n. paratype male genitalia. 14. Lateral. 15. Dorsal. 16. Ventral.

black npl; 2/2 black spal; 1/1 black pal; mane weak black anteriorly (a few small orange setae bordering), orange-yellow behind suture. Scutellum with 4 black marginal bristles; disc with orange setae (a few black). Wing: 5,2 × 1,7 mm; membrane transparent and colourless. Legs: femora dark red-brown, rest dark-brown (proximal parts of tibiae a little lighter); cx1 with white bristles and setae anteriorly; cx3 with 1 yellow bristle laterally. Hind femur: bristles yellow (fine dark red-brown), long setae brown and yellow, short setae tiny yellow-white.

Abdomen: Dark red-brown, red-gold pruinose. T3 with 2 black marginal bristles (no discals); fine setae white laterally, yellow centrally, black dorsally. Genitalia as in Figs 14–16 (paratype illustrated); epandrial lobes simple with a cluster of small darkly coloured setae on inside surface of tip; gonostyle well developed with a few spines apically; aedeagus with a sharply-pointed subapical, dorsal process and upturned tip.

Paratypes: 21 ♂ 5 ♀ 1? similar to holotype.

Material examined: SOUTH AFRICA: *Cape Province:* 3 ♂ (holotype & paratypes), Strandfontein (3017DC not 3418BA as on label), Groot Sandleegte, 10–12.x.1977, Miller (NM); 1 ♂ (paratype), Hondeklipbaai (3017AD), 8.ix.1972, Irwin, coastal dunes, sea level (NM); 1 ♂ 1? (paratypes), 2,5 mi S Elandsbaai (3218AD), 16.ix.1972, Irwin, coastal sand dunes, 30 ft (NM); 1 ♂ (paratype), 11 mi NNE Hondeklipbaai, 8.ix.1972, Irwin, reddish sand, shrubs, 200 ft (NM); 2 ♂ (paratypes), 12 km W Soutfontein (3017DA), 4.ix.1981, Londt, Schoeman & Stuckenberg, succulent Karoo (NM); 1 ♂ (paratype), Port Nolloth (2916BD), xi.1921, Austin (NM); 2 ♂ 3 ♀ (paratypes), 13 km E Port Nolloth (2917AC), 3.ix.1983, Stuckenberg & Londt, westcoast strandveld (NM); 1 ♂ (paratype), McDougall Bay area (2916BD), 5 km S Port Nolloth, 3.ix.1983, Londt & Stuckenberg, westcoast strandveld (NM); 4 ♂ 2 ♀ (paratypes), Wallekraal (3017BC), Namaqualand, x.1950, Mus Expd (SAM); 6 ♂ (paratypes), 6m S Garies (SAM). NM Type No. 2967. SAM Type No. 3869 (paratypes).

Distribution: Coastal parts of Namaqualand and north-west Cape Province.

Neolophonotus amplus sp. n.

Figs 17–19

Etymology: L. *amplus* = large. Refers to the fact that this is the largest species in the *chionthrix* group.

Description: Based on holotype ♂.

Head: Antenna dark red-brown with orange-brown joints; all bristles and setae of scape and pedicel white. Eye:face ratio 1:0,25; eye:lower facial margin ratio 4,7:1. Mystax white but with a few black setae on lower facial margin. Occipital setae: upper—shortish, yellow-white, not proclinate; central—pale yellow-white; lower—white. Proboscis and palpi dark red-brown to black.

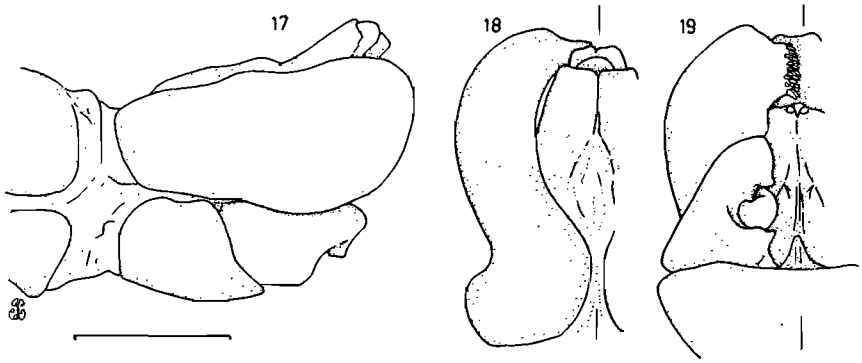
Thorax: ktg s and mtanepst s white. Mesonotal setae: acr absent; dc black, *ca.* 6 pairs, behind suture only; pprn short, white; 2/2 pale yellow-white npl; 2/2 pale yellow-white (1 black on left side) spal; 2/2 yellow pal; mane absent except for a tuft of white setae postsuturally. Scutellum with 8 pale yellow-white marginal bristles; disc with 1 pale yellow-white bristle and white setae. Wing: 11,1 × 3,9 mm; membrane transparent and colourless. Legs: femora dark red-brown, rest dark brown; cx1 with white bristles and setae anteriorly; cx3 with 1 white bristle laterally. Hind femur: all bristles and setae shortish white.

Abdomen: Terga dark red-brown with orange-brown hind margins; red-gold pruinose. T3 with 2–3 yellow-white marginal and 4–5 yellow-white discal bristles; all fine setae yellow-white. Genitalia as in Figs 17–19; epandrial lobes simple in structure with inwardly directed, setae-bearing tips (best seen in ventral view); aedeagus shortish but large, membranous and unlike the other species in the group.

Paratypes: 1 ♂ 1 ♀ similar to holotype.

Material examined: NAMIBIA: 1 ♂ (holotype), Hotsas bore h., Game Res. No. 3, 29.iv.1966, H. Dick Brown (NM); 1 ♂ (paratype), Asab (2517BD), xii.1925, J. S. Brown (SAM); 1 ♀ (paratype), Namib plain W Tsondabvlei (2315CD), 28.iv.1969, H. D. Brown (NCI). NM Type No. 2968. SAM Type No. 3875 (paratype).
Although I don't know exactly where the holotype was collected I believe it must have been in the Namib Desert reserve south-east of Walvisbaai.

Distribution: Central part of southern Namibia.



Figs 17–19. *Neolophonotus amplus* sp. n. holotype male genitalia. 17. Lateral. 18. Dorsal. 19. Ventral.

Neolophonotus anguicolis sp. n.

Figs 20–23

Etymology: L. *anguis* = snake; *colis* = penis. Refers to the long serpentine aedeagus possessed by this species.

Description: Based on holotype ♂.

Head: Antenna black (greasy); scape and pedicel with black and white setae. Eye:face ratio 1:0,24; eye:lower facial margin ratio 7,5:1. Mystax entirely white. Occipital setae: upper—long, white, proclinate; central—pale yellow; lower—white. Proboscis and palpi dark red-brown to black.

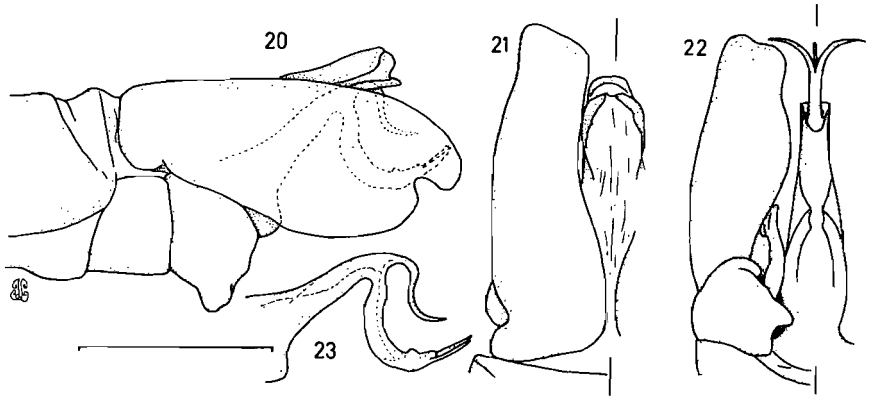
Thorax: ktg s and mtanepst s pale yellow. Mesonotal setae: acr absent (or so short as to be hidden amongst setae of mane); dc black, *ca.* 8 pairs extending well anterior of suture; pprn longish, pale yellow and white; 3/3 pale-yellow npl; 2/2 yellow spal (1 black on left side); 1/1 pal (black on left, yellow on right, accompanied by 1 smaller bristle-like seta); mane black anteriorly (bordered with a few short white setae); white behind suture. Scutellum with 7 pale yellow, marginal bristles; disc with 3 black bristles and pale yellow-white setae. Wing: 7,4 × 2,5 mm; membrane transparent and colourless. Legs: dark red-brown, femora a little darker and proximal tip of tibiae yellow-brown; cx1 with white bristles and setae anteriorly; cx3 with 1–2 pale yellow bristles laterally. Hind femur: all bristles and setae pale yellow.

Abdomen: Dark red-brown (greasy). T3 with 3 pale yellow marginal bristles (no discals); all fine setae short yellow-white. Genitalia as in Figs 20–23; epandrial lobes with a notch at tip; gonocoxite with a ventral bump (in lateral view). Aedeagus longish, S-shaped in lateral view and with a dorsal S-shaped projection.

Paratypes: 1 ♂ 1 ♀, agree well with holotype.

Material examined: SOUTH AFRICA: *Orange Free State:* 1 ♂ (holotype), Middelpunt 100, Bloemfontein (2926AA), 5.x.1982, S. Louw (NM); 1 ♂ 1 ♀ (paratypes), 26 mi N Postmasburg (2823AC), Mus Staff (SAM). NM Type No. 2969. SAM Type No. 3876 (paratypes).

Distribution: Northern Steppe region of the Cape Province and OFS.



Figs 20–23. *Neolophonotus anguicolis* sp. n. holotype male genitalia. 20. Lateral. 21. Dorsal. 22. Ventral. 23. Detail of aedeagus.

Neolophonotus chionthrix Hull, 1967 **stat. n.**

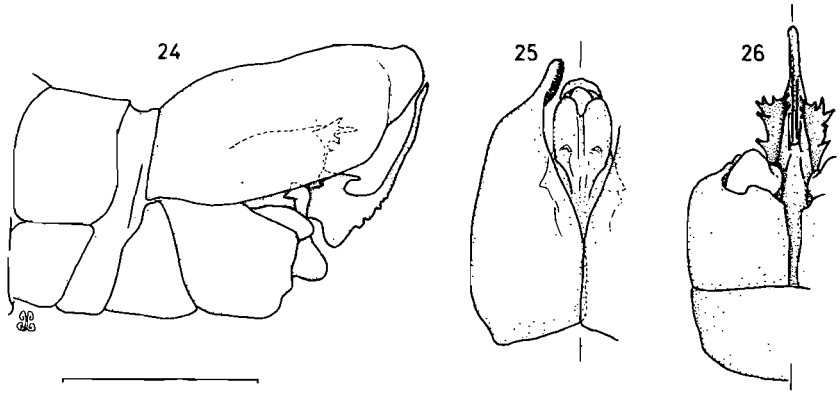
Figs 24–26

Neolophonotus (Lophopeltis) molitor chionthrix Hull, 1967:279.

Redescription: Based on holotype ♂.

Head: Antenna black; scape with black and white setae, pedicel with black setae only. Eye:face ratio 1:0,19; eye:lower facial margin ratio 7,9:1. Mystax white. Occipital setae: upper—black (few white); central—yellow-white; lower—white. Proboscis and palpi dark red-brown.

Thorax: ktg s and mtanepst s white. Mesonotal setae: acr long, black, anteriorly only; dc black, *ca.* 7 pairs, a few anterior of suture; pprn white; 3/3 yellow npl; 2/2 black spal; 1/1 black pal; mane short, dark red-brown anteriorly (white setae bordering), long white behind suture. Scutellum with 6 black and white marginal bristles; disc with many white setae. Wing: 7,2 × 2,3 mm; membrane transparent and colourless. Legs: dark red-brown; cx1 with white bristles and setae anteriorly; cx3 with 1–2 bristles laterally. Hind femur: all bristles and setae white.



Figs 24–26. *Neolophonotus chionthrix* Hull, 1967 Kenhardt male genitalia. 24. Lateral. 25. Dorsal. 26. Ventral.

Abdomen: Black, silver pruinose. T3 with 4 white marginal and *ca.* 6 white discal bristles; fine setae white. Genitalia as in Figs 24–26; epandrial lobes with short, black, spine-like setae at apices; aedeagus complex with dorsal and lateral spine-like processes; gonostyle with a bulbous base which projects distally; proctiger with numerous darkly coloured setae ventrally.

Material examined: SOUTH AFRICA: *Cape Province:* 1 ♂ (holotype), Upington (2821AC), Loc no 66, 27.xi.1950, Swedish S A Expedition, Brink & Rudebeck (ZIL); 1 ♀, Upington (2821AC), 10–12.x.1966 (SAM); 1 ♂, Kenhardt (2921AC), 2.xi.1946, Schumann (NM); 2 ♂, Calvinia, 12&13.xi, J. A. (AMNH); 5 ♂, Aggenys (2918BB) or Bushmanland, between Springbok and Pella, x.1959, Mus Staff (SAM); 24 ♂ 18 ♀ 3?, Papendorp (3118CA) Olifants River, x.1950, Mus Expd (SAM, NM); 2 ♂, Papendorp (3118AC), xi.1956 (SAM); 4 ♂ 1 ♀, Rooinek (3320BD) Laingsburg Dist, i.1949, Zinn-Hesse, Mus Expd (SAM); 4 ♂, 17 mi S of

Loeriesfontein (3019CD), ix.1961 (SAM); 2 ♂ 1 ♀, Knersvlakte (3118BC), 1.x.1966 (SAM); 10 ♂ 8 ♀ 1?, Knersvlakte, x.1939, Mus Staff (SAM); 18 ♂ 8 ♀, Putsonderwater (2921BB), x.1939, Mus Staff (SAM); 1 ♂, Bowesdorp (= Kamieskroon 3017BB), ix.1941, Mus Staff (SAM); 1 ♂, Doringbaai (3118CC), xi.1956 (SAM); 1 ♂ 1 ♀, Moordenaars Karoo, Lammerfontein (3220DD), x.1952, Mus Expd (SAM); 19 ♂ 13 ♀, Pofadder (2919AB) Bushmanland, x.1939, Mus Staff (SAM, NM); 28 ♂ 16 ♀ 2?, Niekerkshoop (2922BD) Griqualand West, x.1939, Mus Staff (SAM). NAMIBIA: 3 ♂ 1 ♀, Gt Karas Mts (2718BB), xi.1936, Mus Staff (SAM); 1 ♂, Noachabeb (2718BC), 18.x.1980, Whitehead (SAM).

Distribution: Karoo region, and Desert and Poor Steppe region of Cape Province and Namibia.

Remarks: Hull (1967) described *chionthrix* as a subspecies of *molitor* Wiedemann. A study of the holotype reveals that this specimen belongs to a distinctive species, rather different from *molitor*. Hull's illustration of the male genitalia is poor and was prepared without first clearing the structures.

Neolophonotus coetzeei sp. n.

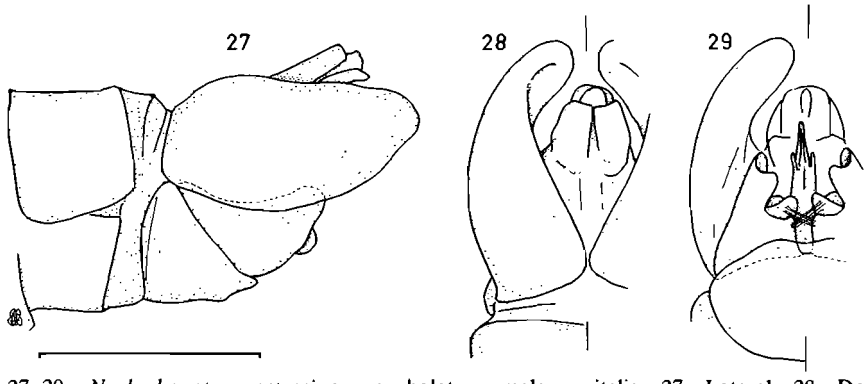
Figs 27–29

Etymology: Named for Mr C. G. Coetzee, former head of the State Museum, Windhoek, who has assisted me in many ways.

Description: Based on holotype ♂.

Head: Antenna dark red-brown to black; scape and pedicel with dark red-brown and white setae ventrally and white setae dorsally. Eye:face ratio 1:0,19; eye:lower facial margin ratio 11,8:1. Mystax black and white (predominantly white in upper part, black in lower part—but mixed centrally). Occipital setae: upper—long, black, proclinate; central and lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s white. Mesonotal setae: acr long, black, anteriorly only; dc black, *ca.* 6 pairs, go well anterior of suture; pprn long, white; 3/3 black npl; 2/2 black spal; 1/1 black (plus 1 smaller white bristle-like seta) pal; mane short



Figs 27–29. *Neolophonotus coetzeei* sp. n. holotype male genitalia. 27. Lateral. 28. Dorsal. 29. Ventral.

dark red-brown anteriorly (bordered by white setae), white behind suture. Scutellum with 4 black marginal bristles; disc with 4 black bristles and long white setae. Wing: 7,5 × 2,3 mm; membrane transparent and colourless. Legs: dark red-brown; cx1 with white bristles and setae anteriorly; cx3 with 2 white bristles laterally. Hind femur: bristles black, long and short setae black and white.

Abdomen: Dark red-brown to black, silver pruinose. T3 with 2–4 white, long, marginal and 4–5 white discal bristles; fine setae long white. Genitalia as in Figs 27–29; epandrial lobe simple; aedeagus smallish and not particularly elaborate.

Paratypes: 4 ♂ 1 ♀ similar to holotype but with a number of setae and bristles being yellow or white instead of black.

Material examined: NAMIBIA: 1 ♂ (holotype) 1 ♀ (paratype), Kaokoland, Ondorusu Falls, SE1713Bd, 23–26.viii.1973, H13835 (SMW); 3 ♂ (paratypes), 8 mi S Outjo (2016AA), 13.v.1958, Ross & Leech, 1150 m (CAS). ANGOLA: 1 ♂ (paratype), 10 mi NW of Cahama (1614AD), 19.v.1958, Ross & Leech, 1200 m (CAS). SMW Type No. 688.

Distribution: Northern Namibia.

Neolophonotus crassicolis sp. n.

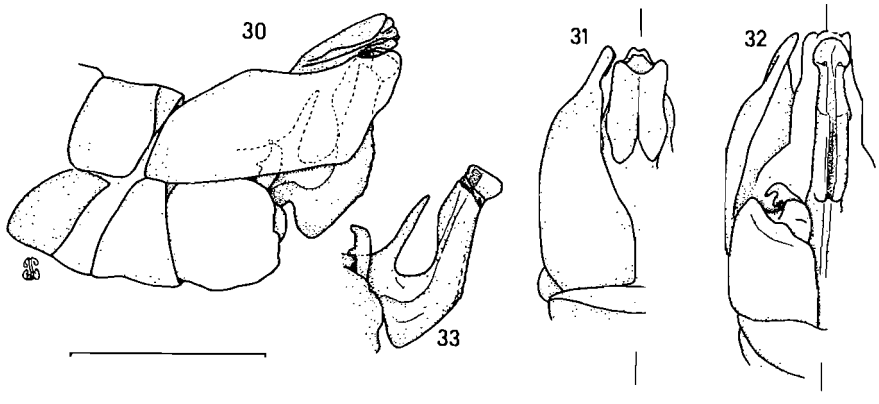
Figs 30–33

Etymology: L. *crassus* = thick; *colis* = penis. Refers to the stout aedeagus.

Description: Based on unique holotype ♂.

Head: Antenna black; scape and pedicel with black setae ventrally and black and white setae dorsally. Eye:face ratio 1:0,17; eye:lower facial margin ratio 12,5:1. Mystax black and white. Occipital setae: upper—black; central—black and white; lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s black and white. Mesonotal setae: acr long, black; dc black, *ca.* 7 pairs, go well anterior of suture; pprn white (few black ones); 3/3 black npl; 2/2 black spal; 1/1 black pal; mane black anteriorly (white setae bordering),



Figs 30–33. *Neolophonotus crassicolis* sp. n. holotype male genitalia. 30. Lateral. 31. Dorsal. 32. Ventral. 33. Detail of aedeagus.

white behind suture. Scutellum with 6 black marginal bristles; disc with white setae only. Wing: 5,0 × 1,6 mm; membrane colourless and transparent. Legs: dark red-brown; cx1 with white bristles and setae anteriorly; cx3 with 1 white bristle laterally. Hind femur: bristles dark red-brown (a few white), long setae dark red-brown and white, short setae white.

Abdomen: Dark red-brown to black, silver pruinose. T3 with 4 (1 white 3 black) marginals and 1 white discal bristle; fine setae white laterally, black (in the form of a triangle) dorsally. Genitalia as in Figs 30–33; aedeagus thick, with a pointed dorsal process.

Material examined: SOUTH AFRICA: *Cape Province:* 1 ♂ (holotype), 25 km N Middelpos (3120CA), 6.ix.1981, Londt, Schoeman & Stuckenberg, W Mountain Karoo (NM). NM Type No. 2970.

Distribution: Known only from the type-locality in the Cape Province.

Neolophonotus crenulatus sp. n.

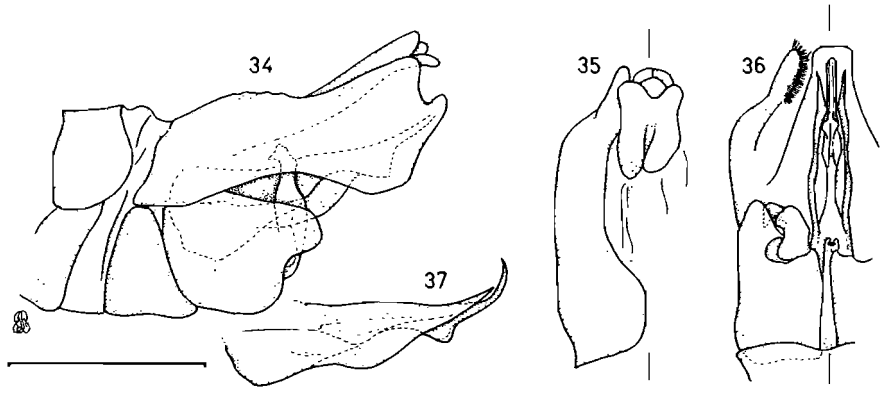
Figs 34–37

Etymology: L. *crenulatus* = minutely crenate or notched. Refers to the notched tip of the epandrial lobe.

Description: Based on holotype ♂.

Head: Antenna dark red-brown; scape and pedicel with dark red-brown and white setae (no white ventrally on pedicel). Eye:face ratio 1:0,22; eye:lower facial margin ratio 11,5:1. Mystax black and white. Occipital setae: upper—dark red-brown; central—dark red-brown; lower—white. Proboscis and palpi dark red-brown.

Thorax: ktg s and mtanepst s black. Mesonotal setae: acr absent; dc black, *ca.* 6 pairs, go well anterior of suture; pprn long, brown and white; 3/3 black npl; 2/2 black spal; 2/2 black pal; mane short dark red-brown anteriorly (bordered by white setae), white setae behind suture. Scutellum with 4 black marginal bristles; disc with long white setae. Wing: 6,1 × 2,1 mm; membrane transparent and colourless. Legs: dark red-brown with proximal parts of tibiae slightly paler; cx1 with white bristles and setae anteriorly; cx3 with 1 white bristle laterally. Hind femur: bristles



Figs 34–37. *Neolophonotus crenulatus* sp. n. paratype male genitalia. 34. Lateral. 35. Dorsal. 36. Ventral. 37. Detail of aedeagus.

dark red-brown and white, long setae dark red-brown and white, short setae white dorsally and laterally, dark red-brown ventrally.

Abdomen: Dark red-brown to black, silver-gold pruinose. T3 without obvious bristles; fine setae red-brown (a few white ones scattered amongst them). Genitalia as in Figs 34–37; epandrial lobe notched distally; aedeagus with a sharply pointed forked projection on dorsal side, tip strongly upturned and pointed.

Paratype: 1 ♂ similar to holotype.

Material examined: SOUTH AFRICA: *Cape Province:* 2 ♂ (holotype & paratype), Strandfontein (3118CC), iii.1950, Zinn & Hesse (SAM, NM). SAM Type No. 3877 (holotype), NM Type No. 2971.

Distribution: Known only from the type-locality. There are several places with the name Strandfontein; the best-known one is on the coast of Namaqualand.

Neolophonotus expandocolis sp. n.

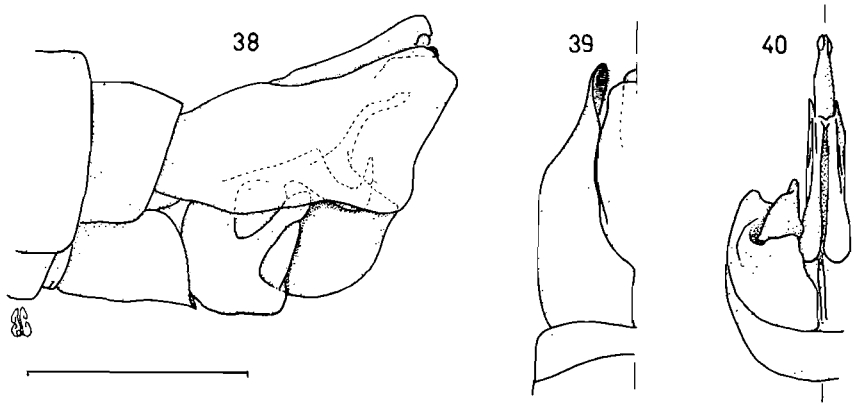
Figs 38–40

Etymology: L. *expando* = expanded; *colis* = penis. Refers to the expanded ventral plates of the aedeagus.

Description: Based on holotype ♂.

Head: Antenna black; scape and pedicel with black setae (a few yellow on scape). Eye:face ratio 1:0,21; eye:lower facial margin ratio 9,0:1. Mystax predominantly pale yellow-white, black setae on lower facial margin and bordering yellow-white setae, brown-yellow. Occipital setae: upper—long, black; central—black; lower— white and yellow-white. Proboscis and palpi black.

Thorax: ktg s and mtanepst s black (a few small white). Mesonotal setae: acr long, black; dc black, *ca.* 8 pairs, go well anterior of suture; pprn black (few white); 3/3 black npl; 2/2 black spal; 1/1 black pal (accompanied by a single black bristle-like seta); mane black anteriorly (white setae bordering), white behind suture.



Figs 38–40. *Neolophonotus expandocolis* sp. n. paratype male genitalia. 38. Lateral. 39. Dorsal. 40. Ventral.

Scutellum with 4 black marginal bristles; disc with a few black bristles and yellow-white setae (a few black). Wing: 6,2 × 1,9 mm; membrane colourless and transparent. Legs: dark red-brown; cx1 with white bristles and setae anteriorly; cx3 with 1 white bristle laterally. Hind femur: bristles pale yellow (a few dark red-brown), long setae dark red-brown, short setae short white dorsally, longish dark red-brown ventrally.

Abdomen: Dark red-brown, silver pruinose. T3 wth 2 white (1 black on left side) marginals, no obvious discal bristles; fine setae white laterally and anterodorsally, black posterodorsally. Genitalia as in Figs 38–40; epandrial lobe wider distally than proximally (in lateral view), and with a rather thin, transparent tip; aedeagus with a pair of large, flat, plate-like flanges basoventrally.

Paratypes: 69 ♂ 49 ♀ 1? similar to holotype.

Material examined: SOUTH AFRICA: *Cape Province:* 11 ♂ (holotype and paratypes) 12 ♀ (paratypes), 34,5 km S Soetwater (3119CD), 500 ♂, 29.ix.–1.x.1977, Miller, malaise trap (NM); 4 ♂ 2 ♀ (paratypes), 32 km NE Clanwilliam, Brandewyn R. (3219AA), 2–3.x.1977, Miller (NM); 1 ♂ (paratype), karroo at junction of Calvinia–Sutherland Rd nr Inverdoorn Ceres (3119BD), 2–3.x.1959, Stuckenberg (NM); 17 ♂ 14 ♀ 1? (paratypes), Near Doornbosch (Doornbos 3324AC), ix.1961 (SAM), 11 ♂ 7 ♀ (paratypes), 7 mi S Loeriesfontein (3019CD), ix.1961 (SAM); 2 ♂ 1 ♀ (paratypes), 5 mi S Van Rhyns Pass (3119AC), viii.1961 (SAM); 19 ♂ 9 ♀ (paratypes), Clanwilliam (3218BB) Nardouw, ix.1941 (SAM); 2 ♂ 1 ♀ (paratypes), Augusfontein (Calvinia 3119BD), ix.1947, Mus Expd (SAM); 1 ♂ 3 ♀ (paratypes), Calvinia (3119BD), ix.1947, Mus Expd (SAM); 1 ♂ (paratype), 5 mi N Nieuwoudtville (3119AC), ix.1961 (SAM). NM Type No. 2972. SAM Type No. 3883 (paratypes).

Distribution: Central south-western Cape Province.

Neolophonotus leucothrix sp. n.

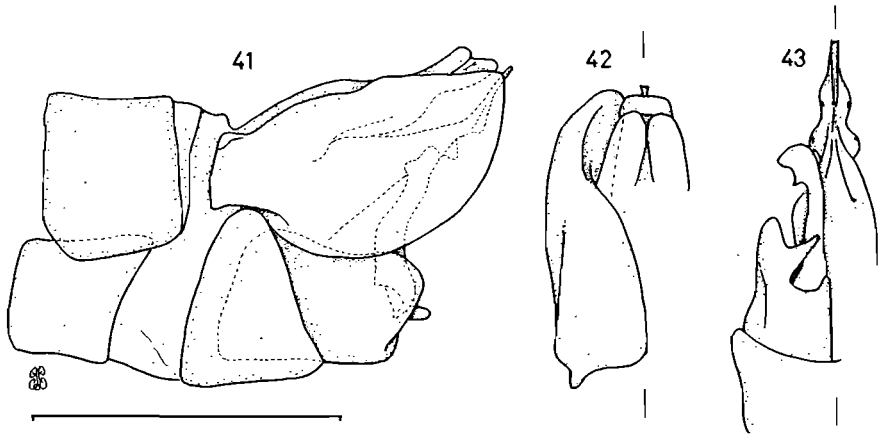
Figs 41–43

Etymology: Gr. *leukos* = white; *thrix* = hair. Refers to the many white setae.

Description: Based on holotype ♂.

Head: Antenna dark red-brown; scape and pedicel with black and white setae. Eye:face ratio 1:0,23; eye:lower facial margin ratio 11,2:1. Mystax black and white (predominantly white) Occipital setae: upper—long, black and white, proclinate; central and lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s white. Mesonotal setae: acr long black, anteriorly only; dc black, *ca.* 6 pairs, go well anterior of suture; pprn long, white; 3/3 white npl; 2/2 white spal; 1/1 white pal; mane short dark red-brown anteriorly (bordered by white setae), white postsuturally. Scutellum with 4 white marginal bristles; disc with 2 white bristles and long white setae. Wing: 5,7 × 1,9 mm; membrane transparent and colourless; R_{4+5} widely forked. Legs: dark red-brown; cx1 with white bristles and setae anteriorly; cx3 with 1 long white bristle laterally. Hind femur: all bristles and setae white.



Figs 41–43. *Neolophonotus leucothrix* sp. n. holotype male genitalia. 41. Lateral. 42. Dorsal. 43. Ventral.

Abdomen: Black, silver pruinose. T3 with 5 white, long, marginal and 3 white discal bristles; fine setae long white. Genitalia as in Figs 41–43; epandrial lobe simple; aedeagus smallish and not particularly elaborate; gonocoxite with inwardly directed process subapically (seen both in lateral and ventral view).

Paratypes: 8 ♂ 3 ♀ similar to holotype but with a number of setae and bristles different in colour.

Material examined: NAMIBIA: 1 ♂ (holotype) 7 ♂ 3 ♀ (paratypes), Kamanyab (? Kamanjab 19°38'S:14°50'E), iii.1925, Mus Expd (SAM, NM); 1 ♂ (paratype), Otjikotoberg 459, SE1917Ab, 8–13.vii.1974, H20160 (SMW). SAM Type No. 3871 (holotype) 3872 (paratypes). NM Type No. 2973. SMW Type No. 689.

Distribution: Northern Namibia.

Neolophonotus macrocercus sp. n.

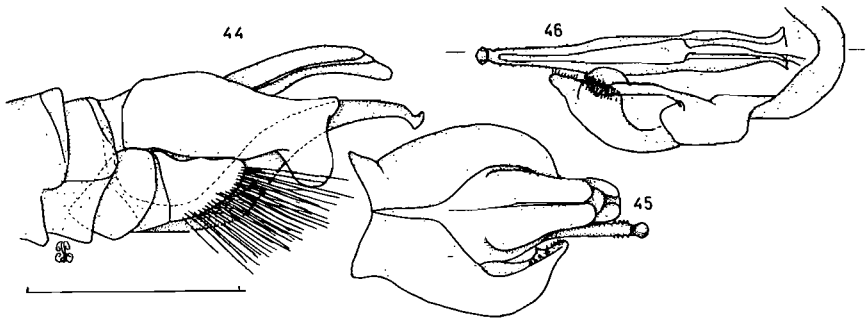
Figs 44–46

Etymology: Gr. *makros* = long; *kerkos* = tail. Refers to the apparently elongate proctiger of the male.

Description: Based on unique holotype ♂.

Head: Scape and pedicel brown-yellow, rest brown; scape with brown and yellow setae, pedicel with brown setae only. Eye:face ratio 1:0,21; eye:lower facial margin ratio 13,5:1. Mystax yellow with a few dark red-brown setae dorsally. Occipital setae: upper—dark red-brown; central—dark red-brown and yellow; lower — white. Proboscis and palpi dark red-brown.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae: acr long, black; dc black, *ca.* 8 pairs, go well anterior of suture; pprn long yellow; 2/2 yellow npl; 2/2 yellow spal; 1/1 yellow pal; mane black anteriorly, white postsuturally. Scutellum with 2 yellow marginal bristles; disc with yellow setae only. Wing: 3,9 × 1,4 mm; membrane colourless and transparent. Legs: Femora light brown, rest yellowish; cx1 with



Figs 44–46. *Neolophonotus macrocercus* sp. n. holotype male genitalia. 44. Lateral. 45. Dorsal. 46. Ventral.

yellow white bristles and setae anteriorly; cx3 with 1 yellow bristle laterally (accompanied by 2 quite strong setae). Hind femur: Bristles yellow (a few brown distally), long and short setae yellow.

Abdomen: Brown, fine gold pruinose. T3 with 5 yellow marginal and 1–3 smallish yellow discal bristles; fine setae yellow laterally, black dorsally. Genitalia as in Figs 44–46; epandrial lobe with a large, ventrally situated, subapical lobe (lateral view); aedeagus large and long; gonocoxites widely separated (ventrally); proctiger longer than epandrial lobes.

Material examined: SOUTH AFRICA: *Cape Province:* 1 ♂ (holotype), Wyks Vley (? Van Wyksvlei 3021BD), Cape Col (SAM). SAM Type No. 3878.

Distribution: Known only from the type-locality in the Cape Province.

Neolophonotus milleri sp. n.

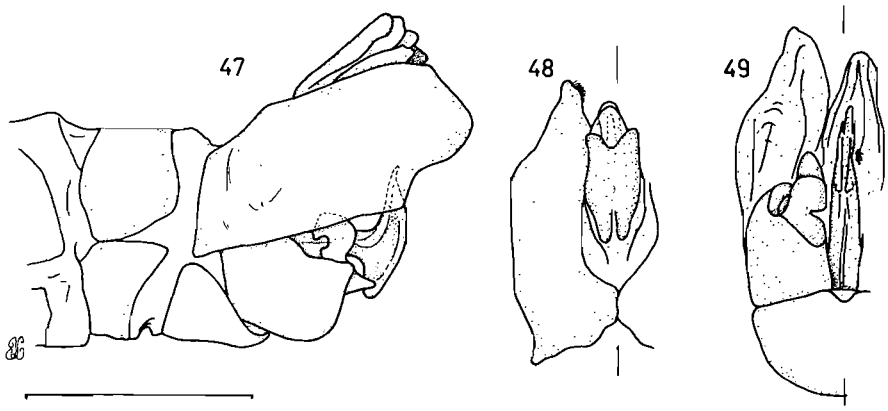
Figs 47–49

Etymology: Named for Dr R. M. Miller, University of Natal, who collected some of the type specimens.

Description: Based on holotype ♂.

Head: Antenna dark red-brown; scape and pedicel with dark red-brown setae (a few tiny white ones on scape). Eye:face ratio 1:0,21; eye:lower facial margin ratio 8,7:1. Mystax white with a few black setae (along lower facial margin and in upper part just below antennal bases). Occipital setae: upper—black; central—white and black; lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s black and yellow, mtanepst s yellow (a few white). Mesonotal setae: acr few black anteriorly; dc black, *ca.* 7 pairs, a few anterior of suture; pprn long, black and white; 2/3 yellow npl; 2/2 black spal; 1/1 black pal; mane short black anteriorly (bordered by white setae), white setae behind suture. Scutellum with 4 black, marginal bristles; disc with black and white setae. Wing: 5,2 × 1,7 mm; membrane transparent and colourless. Legs: dark red-brown with proximal parts of tibiae slightly yellow-brown; cx1 with white bristles and setae anteriorly; cx3 with 1–2 white bristles laterally. Hind femur: bristles yellow, long setae white and brown, short setae white.



Figs 47–49. *Neolophonotus milleri* sp. n. holotype male genitalia. 47. Lateral. 48. Dorsal. 49. Ventral.

Abdomen: Dark red-brown, red-gold pruinose. T3 without obvious bristles; fine setae white (a few black) laterally, black dorsally. Genitalia as in Figs 47–49; epandrial lobe with a ventrally situated, subapical depresson; aedeagus with an upturned tip and a ventrally directed process (in lateral view); gonostyle with a basal process which juts out distally.

Paratypes: 10 ♂ 5 ♀ similar to holotype.

Material examined: SOUTH AFRICA: *Cape Province:* 2 ♂ (holotype & paratype), 32 km NE Clanwilliam (3219AA) Brandewyn R., 2–3.x.1977, Miller (NM); 1 ♂ 2 ♀ (paratypes), Citrusdal (3219CA) Dist, xi.1948, Mus Expd (SAM); 2 ♂ 1 ♀ (paratypes), 8 mi N Citrusdal (3219CA), ix.1961 (SAM); 6 ♂ 1 ♀ (paratypes), 4 mi S Clanwilliam (3218BB), ix.1961 (SAM); 1 ♀ (paratype), Olifants River between Citrusdal and Clanwilliam, iii.1935, Mus Staff (SAM). NM Type No. 2974. SAM Type No. 3868 (paratypes).

Distribution: South-western Cape Province (southern parts of Desert and Poor Steppe region).

Neolophonotus namaqua sp. n.

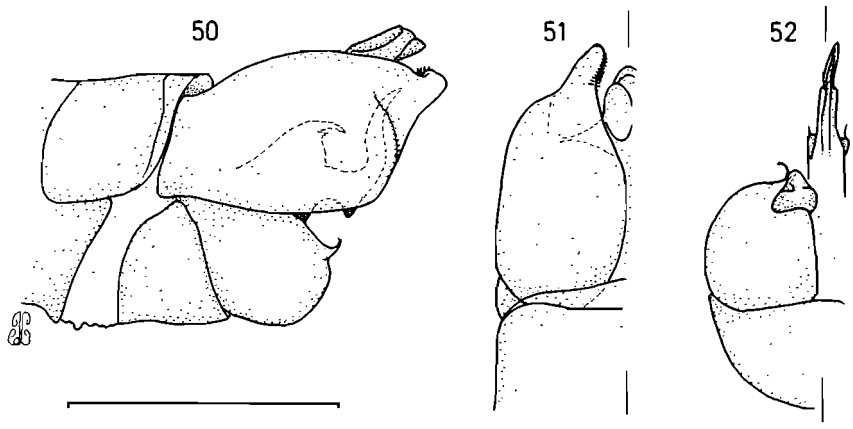
Figs 50–52

Etymology: Named after Namaqualand.

Description: Based on holotype ♂.

Head: Antenna dark red-brown; scape and pedicel with black setae (a few tiny yellow ones dorsally on scape). Eye:face ratio 1:0,21; eye:lower facial margin ratio 8,1:1. Mystax predominantly pale yellow-white, black setae on lower facial margin and just below antennal bases. Occipital setae: upper—long, black; central — yellow; lower—yellow-white. Proboscis and palpi dark red-brown.

Thorax: ktg s black and yellow, mtanepst s yellow. Mesonotal setae: acr long, black; dc black, *ca.* 6 pairs, a few anterior of suture; pprn shortish yellow; 3/3 black npl; 2/2 black spal; 1/1 black pal (accompanied by a single black bristle-like seta on



Figs 50–52. *Neolophonotus namaqua* sp. n. paratype male genitalia. 50. Lateral. 51. Dorsal. 52. Ventral.

left side); mane black anteriorly (yellow setae bordering), white behind suture. Scutellum with 4 black, marginal bristles; disc with long, yellow setae only. Wing: 5,1 × 1,5 mm; membrane colourless and transparent. Legs: femora dark red-brown, rest dark brown (proximal parts of tibiae lighter); cx1 with white bristles and setae anteriorly; cx3 with 1 yellow-white bristle laterally. Hind femur: bristles yellow and black (yellow ventrally, black dorsally), long setae yellow and dark red-brown, short setae yellow.

Abdomen: Dark red-brown, gold pruinose. T3 with 5 black and yellow marginals and 1 black discal bristle; fine setae yellow laterally (a few black). Genitalia as in Figs 50–52; epandrial lobe fairly acutely pointed and equipped with small, black setae on inside surface of tip; aedeagus with a trifurcate dorsal projection; gonocoxite with a small pointed process distally.

Paratypes: 13 ♂ 4 ♀, similar to holotype.

Material examined: SOUTH AFRICA: *Cape Province:* 9 ♂ (holotype and paratypes) 2 ♀ (paratypes), Strandfontein (not 3418BA as on label), Groot Sandleegte, 12.x.1977, Miller (NM); 1 ♂ 1 ♀ (paratypes), Strandfontein coast W of Vanrhynsdorp (3017DC), 15–17.x.1964, Stuckenberg (NM); 3 ♂ (paratypes), Knersvlakte (3118DA) N of Vanrhynsdorp, 6–9.x.1964, Stuckenberg (NM); 1 ♂ 1 ♀ (paratypes), 12 mi NNE Garies (3018AC), 9.ix.1972, Irwin, nr waterfall 1350 ft (NM). NM Type No. 2975.

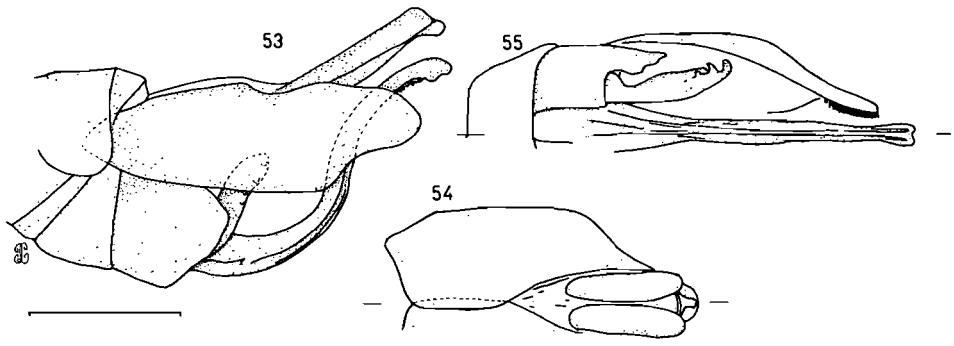
Distribution: Southern Namaqualand area of Desert and Poor Steppe region.

Neolophonotus namibiensis sp. n.

Figs 53–55

Etymology: Named after the country in which this species was collected—Namibia.

Description: Based on holotype ♂.



Figs 53–55. *Neolophonotus namibiensis* sp. n. holotype male genitalia. 53. Lateral. 54. Dorsal. 55. Ventral.

Head: Antenna dark red-brown to black; scape and pedicel with black and white setae. Eye:face ratio 1:0,23; eye:lower facial margin ratio 8,9:1. Mystax white. Occipital setae: upper—long, black, proclinate; central and lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s white. Mesonotal setae: acr long black, anteriorly only; dc black, *ca.* 8 pairs, go well anterior of suture; pprn few, white; 3/3 pale yellow npl; 2/2 pale yellow (1 black on right side) spal; 1/1 yellow (accompanied by 1 small white bristle-like seta) pal; mane short black anteriorly (bordered by white setae), long white behind suture. Scutellum with 4 pale yellow marginal bristles; disc with long white setae. Wing: 7,7 × 2,4 mm; membrane transparent and colourless. Legs: dark red-brown, femora nearly black; cx1 with white bristles and setae anteriorly; cx3 with 2 white bristles laterally. Hind femur: all bristles and setae white.

Abdomen: Dark red-brown, silver pruinose. T3 with 4 white, long, marginal and 2–3 white discal bristles; fine setae long white. Genitalia as in Figs 53–55; epandrial lobe elongate, aedeagus longish, well developed, sinuous; gonostyle with three processes at tip; proctiger long.

Paratype: 1 ♂ similar to holotype.

Material examined: NAMIBIA: 2 ♂ (holotype & paratype), Bethanien, Vogelstrausskluft 87, SE2717Ba, 24–29.ix.1974, H20538 (SMW). SMW Type No. 690.

Distribution: Southern Namibia.

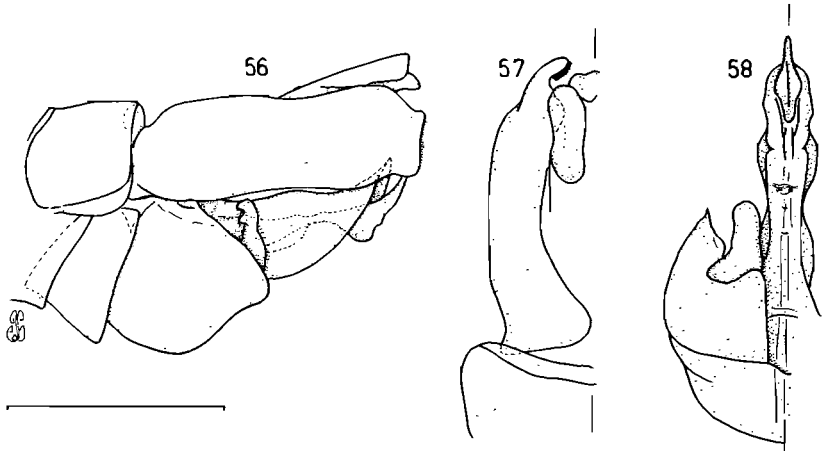
Neolophonotus obtectocolis sp. n.

Figs 56–58

Etymology: L. *obtectus* = covered over, *colis* = penis. Refers to the hood-like projection covering the aedeagal tip.

Description: Based on unique holotype ♂.

Head: Antenna dark red-brown to black; scape and pedicel with black and white setae. Eye:face ratio 1:0,22; eye:lower facial margin ratio 9,5:1. Mystax black and



Figs 56–58. *Neolophonotus obtectocolis* sp. n. holotype male genitalia. 56. Lateral. 57. Dorsal. 58. Ventral.

white mixed (black along lower facial margin). Occipital setae: upper—long, black; central—black; lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s black, mtanepst s black and white. Mesonotal setae: acr long black, anteriorly only; dc black, *ca.* 7 pairs, go well anterior of suture; pprn few, white; 3/4 black npl; 2/3 black spal; 2/2 black pal; mane short dark red-brown anteriorly (bordered by white setae), white setae behind suture. Scutellum with 4 white marginal bristles; disc with long, white setae. Wing: 6,4 × 2,3 mm; membrane transparent and colourless. Legs: dark red-brown; cx1 with white bristles and setae anteriorly; cx3 with 1 white bristle laterally. Hind femur: bristles pale white and black, long setae white, short setae tiny white dorsally, longer black ventrally.

Abdomen: Dark red-brown, red-gold pruinose. T3 with 3 marginal (2 white, 1 black) and 2 black discal bristles; fine setae short black (few white). Genitalia as in Figs 56–58; epandrial lobe simple with blunt tip bearing small setae on inside surface; aedeagus well developed, with a hood-like dorsal projection jutting out over the aedeagal tip.

Material examined: SOUTH AFRICA: *Cape Province:* 1 ♂ (holotype), Laaiplek (3319DD), 9.x.1977, R. M. Miller, malaise trap (NM). NM Type No. 2976.

Distribution: Known only from the type-locality in the south-western Cape Province.

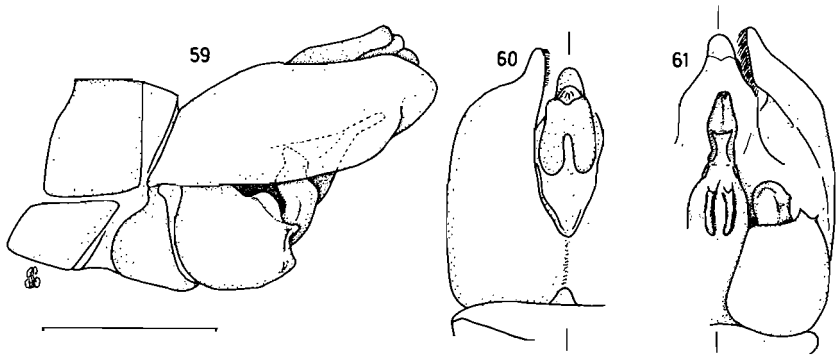
Neolophonotus robertsoni sp. n.

Figs 59–61

Etymology: Named after Dr W. Robertson, pastor of Swellendam, after whom the type-locality of this species was named.

Description: Based on unique holotype ♂.

Head: Antenna dark red-brown; scape and pedicel with dark red-brown setae, a few white ones are present on dorsal surface of pedicel and a single white one



Figs 59–61. *Neolophonotus robertsoni* sp. n. holotype male genitalia. 59. Lateral. 60. Dorsal. 61. Ventral.

present on ventral aspect of scape. Eye:face ratio 1:0,23; eye:lower facial margin ratio 8,0:1. Mystax white and dark red-brown. Occipital setae: upper—long, black; central—black; lower—white. Proboscis and palpi dark red-brown.

Thorax: ktg s and mtanepst s black. Mesonotal setae: acr long black, anteriorly only; dc black, *ca.* 8 pairs, go well anterior of suture; pprn few, white (1 black); 3/3 black npl; 2/2 black spal; 2/2 black pal; mane short dark red-brown anteriorly (bordered by white setae), white setae behind suture. Scutellum with 4 white marginal bristles; disc with 2 black bristles and long white setae. Wing: 7,2 × 2,3 mm; membrane transparent and colourless. Legs: dark red-brown, dorsoproximal parts of tibiae lighter in colour; cx1 with white bristles and setae anteriorly; cx3 with 2–3 white bristles laterally. Hind femur: bristles dark red-brown, long setae dark red-brown (a few white), short setae tiny white.

Abdomen: Dark red-brown, silver pruinose. T3 with 4 marginal (2 white, 2 black) bristles, no discals evident; fine setae short white laterally, black dorsally. Genitalia as in Figs 59–61; aedeagus well developed, with a pair of projections ventrally.

Material examined: SOUTH AFRICA: *Cape Province:* 1 ♂ (holotype), Robertson (3319DD), 26.ix.1927, Ac.U.S. (NM). NM Type No. 2977.

Distribution: Known only from the type-locality in the south-western Cape Province.

The *Neolophonotus squamosus* species-group

This species-group is perhaps the most unnatural one and contains members from several climatically different regions (Table 2) ranging from the winter-rainfall region of the south-west Cape *(theroni)* to the summer-rainfall 'Drakensberg region' of Natal. Most of the species are, however, in the arid Karoo, eastern and north-eastern Cape and southern Namibia. The limited information available suggests that half of the species are spring and early-summer fliers while the other half occur in the late summer.

The 11 species placed in this group are rather varied even though they share the following combination of characters: The metacoxae possess at least one well-

TABLE 2

The distribution and seasonal incidence of species belonging to the *Neolophonotus squamosus* species-group.

Species	Distribution (Climatic regions)													Seasonal incidence (Months of the year)										
	M	A	K	W	S	SE	E	D	L	H	NT	B	Z	J	F	M	A	M	J	J	A	S	O	N	D
ausensis	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—
bicuspis	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—
brevicauda	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—
lawrencei	—	—	*	*	—	—	—	—	—	—	—	—	—	—	—	—	*	*	—	—	—	—	—	—	—
nigriseta	—	—	—	—	—	—	—	*	—	—	—	*	—	—	—	—	*	—	—	—	—	*	—	—	—
schalki	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—
spinicaudata	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—
squamosus	—	*	*	—	*	—	—	—	—	—	—	—	—	*	*	*	*	—	—	—	—	—	—	—	—
stevensoni	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—	*	—	—	—	—	—	—	—
theroni	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—
truncatus	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	*	—	—	—	—

Abbreviations:

M —Mediterranean region of south-western Cape.
A —Southern Cape Coastal region.
K —Little and Great Karoo region.
W —Desert and Poor Steppe region.
S —Southern and Northern Steppe regions.
SE—South-eastern Cape Coastal region.
E —Subtropical region.
D —Drakensberg region.
L —Transvaal Lowveld region.
H —Highveld region.
NT—Northern Transvaal region.
B —Botswana and Northern Namibian region.
Z —Localities north of South Africa and Namibia.

developed lateral bristle; the postpronotal lobes lack setae; the mane is composed of black setae along its entire length (these may be bordered by smaller pale yellowish or white setae). For the present this group seems to be no more than a convenient assemblage of species which cannot be easily placed in other groups.

Key to the species of the *Neolophonotus squamosus* species-group (males only)

1 Disc of scutellum completely lacking well-developed black bristles 2
— Disc of scutellum with at least 2 (often more) strong black bristles 6

2 Excluding the bristles at the tip, hind femur with at least a number of dark red-brown bristles 3
— Excluding the bristles at the tip, hind femur with yellow or white bristles only 4

3 Abdominal tergites with mostly dark red-brown discal and marginal bristles ..... **truncatus** sp. n.
— Abdominal tergites with mostly white discal and marginal bristles ..... **schalki** sp. n.

4 All bristles of hind femur (except those at the tip) yellow; all the long proclinate bristles of the upper occiput are black ..... **brevicauda** sp. n.
— All bristles of hind femur white; at least some long proclinate occipital bristles white 5

5 All bristles of scutellar margin black; pale setae of mystax white ..... **bicuspis** sp. n.
— At least a few bristles of scutellar margin yellow; pale setae of mystax yellow ..... **ausensis** sp. n.

6 Virtually all bristles of thoracic nota and pleura black ..... **nigriseta** sp. n.
— At least some pleural bristles white or yellow 7

7 Hind femur with ventral fine setae long and dark red-brown 8
— Hind femur with ventral fine setae short and white ..... **squamosus** sp. n.

8 Wings yellow-stained; mane entirely black (lacks pale bordering setae); scutellar disc with few white setae ..... **stevensoni** sp. n.
— Wings clear and unstained; mane with white setae bordering black ones; scutellar disc with an obvious cluster of white setae 9

9 Fine setae of T3 short (shorter than distance between bases of marginal bristles and hind margin of tergite); aedeagus with well-developed ventral and dorsoapical thornlike processes ..... **theroni** sp. n.
— Fine setae of T3 longish (longer than distance between bases of marginal bristles and hind margin of tergite); aedeagus long and thin, lacking processes of any description 10

10 All notopleural bristles black ..... **spinicaudata** sp. n.
— At least 1 or 2 notopleural bristles yellow-white ..... **lawrencei** sp. n.

Neolophonotus ausensis sp. n.

Figs 62–64

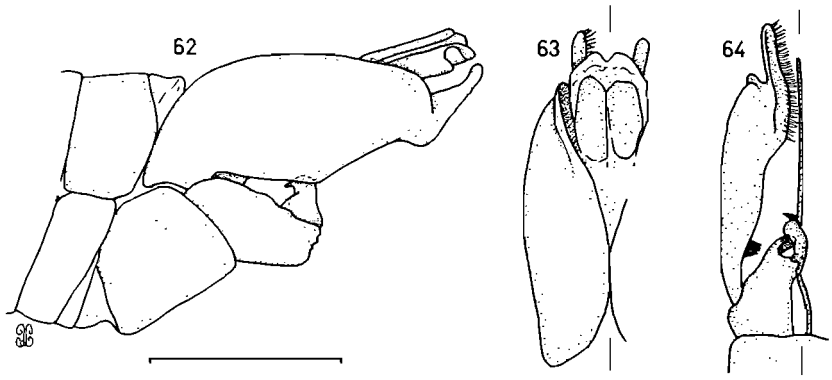
Etymology: Named after the town of Aus in Namibia where the type specimens were collected.

Description: based on holotype ♂.

Head: Antenna dark red-brown to black; scape and pedicel with yellow setae dorsally, black and yellow ventrally. Eye:face ratio 1:0,20; eye:lower facial margin ratio 10,2:1. Mystax black and yellow mixed (black predominates in lower half, yellow in upper half). Occipital setae: upper—long, black and yellow; central—pale yellow; lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s pale yellow (a few white), mtanepst s pale yellow and white. Mesonotal setae: acr long black, anteriorly only; dc black, *ca.* 5 pairs, go well anterior of suture; pprn absent; 3/3 yellow npl; 2/2 black spal; 1/1 yellow pal; mane black along entire length (bordered by white setae). Scutellum with 4 marginal bristles (3 yellow, 1 black), disc with long pale yellow setae (a few black ones). Wing: 5,6 × 1,9 mm; membrane transparent and colourless. Legs: dark red-brown, dorsoproximal parts of tibiae orange; cx1 with pale yellow and white bristles and setae anteriorly; cx3 with 1 pale yellow bristle laterally. Hind femur: bristles pale yellow-white, long setae black and white, short setae tiny pale yellow.

Abdomen: Dark red-brown, gold-red pruinose. T3 with 1 big erect and 3 smaller yellow-white marginal and 1 yellow-white discal bristle; fine setae longish, yellow-white (a few black). Genitalia as in Figs 62–64; epandrial lobe with a



Figs 62–64. *Neolophonotus ausensis* sp. n. holotype male genitalia. 62. Lateral. 63. Dorsal. 64. Ventral.

characteristically shaped, rather pointed tip; style rather squat and with a group of setae subapically; aedeagus long and thin.

Paratypes: 2 ♂ 1 ♀, similar to holotype.

Material examined: NAMIBIA: 3 ♂ (holotype & paratypes) 1 ♀ (paratype), 5 km E of Aus (2616CB), 30.viii.1983, Londt & Stuckenberg, open veld with low green grass and shrubs (NM). NM Type No. 2978.

Distribution: Known only from the type-locality near Aus, a place which receives only a little winter rainfall and appears to be very interesting entomologically.

Neolophonotus bicuspis sp. n.

Figs 65–67

Derivation. L. *bi* = two, *cuspis* = point. Refers to the two-pointed epandrial tip.

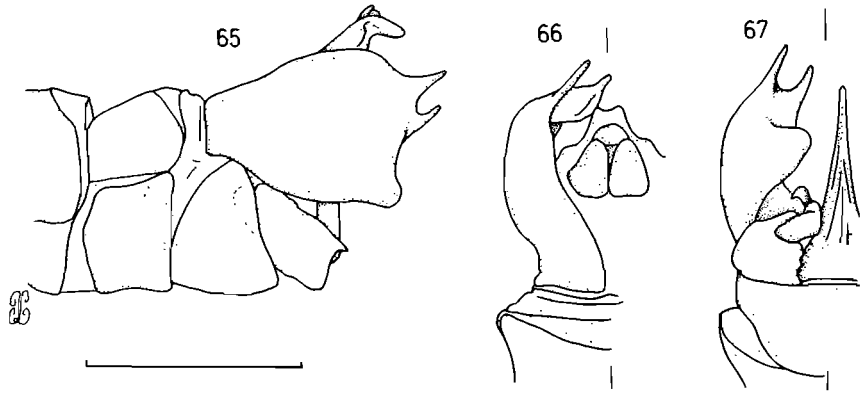
Description. Based on holotype ♂.

Head: Antenna black; scape and pedicel with black and white setae ventrally and white setae dorsally. Eye:face ratio 1:0,19; eye:lower facial margin ratio 10,7:1. Mystax black and white. Occipital setae: upper and central—black and white; lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s white. Mesonotal setae: acr black; dc black 6–7 pairs; pprn absent; 3/3 yellow npl; 2/2 black (1 yellow on right side) spal; 1/1 black pal; mane well developed, black with white setae laterally. Scutellum with 6 black marginal bristles (plus 1 long, yellow seta); disc with white setae (only 2 being black). Wing: 5,7 × 1,7 mm; membrane transparent and colourless. Legs: black; cx1 with white bristles and setae anteriorly; cx3 with 1 white bristle laterally. Hind femur: bristles white, long setae black and white, short setae longish white.

Abdomen: Black; silver pruinose. T3 with 2 white marginal bristles; fine setae white laterally, blackish dorsally. Genitalia as in Figs 65–67; epandrial lobes with two points distally.

Paratypes: 2 ♂ similar to holotype.



Figs 65–67. *Neolophonotus bicuspis* sp. n. holotype male genitalia. 65. Lateral. 66. Dorsal. 67. Ventral.

Material examined: SOUTH AFRICA: *Cape Province:* 2 ♂ (holotype & paratype), 8 km SE Merweville (3221DA), 7.ix.1981, Londt, Schoeman & Stuckenberg, karroid broken veld (NM); 1 ♂ (paratype), 8 km N Prince Albert Road (3221DC), 7.ix.1981, Londt, Schoeman & Stuckenberg, open area (NM). NM Type No. 2979.

Distribution: Karoo region of the southern Cape Province of South Africa.

Neolophonotus brevicauda sp. n.

Figs 68–71

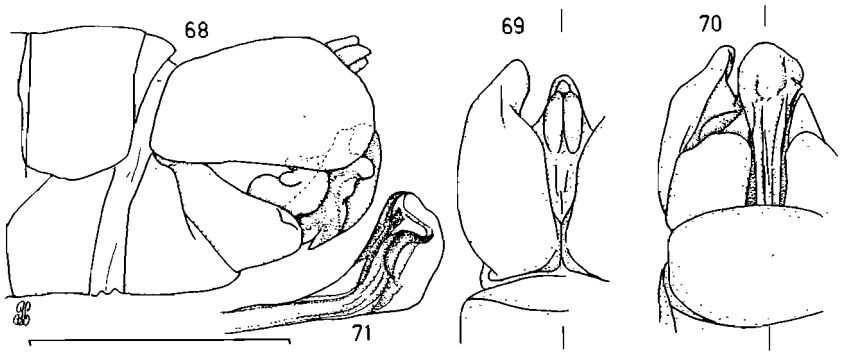
Derivation: L. *brevis* = short; *cauda* = tail. Refers to the short broadly rounded epandrial lobes of this species.

Description: Based on holotype ♂.

Head: Antenna black; scape with black and white setae dorsally and ventrally, pedicel with black setae only. Eye:face ratio 1:0,21; eye:lower facial margin ratio 8,5:1. Mystax yellow and white centrally, few black setae dorsally and on lower facial margin. Occipital setae: upper—black; central—yellow; lower—white. Proboscis and palpi dark red-brown.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae: acr black; dc black *ca.* 6 pairs; pprn absent; 3/4 yellow npl; 2/2 black spal; 1/1 black pal; mane only poorly developed, black with few white setae laterally. Scutellum with 2 black marginal bristles; disc with white setae only. Wing: 6,1 × 1,9 mm; membrane transparent and unstained. Legs: dark red-brown to black with dorsoproximal parts of tibiae yellow-brown; cx1 with white bristles and setae anteriorly; cx3 with 1 white bristle laterally. Hind femur: bristles yellow, long and short setae white.

Abdomen: Dark red-brown; silver and gold pruinose. T3 with 2 yellow marginal and 1 yellow discal bristle; fine setae white laterally, black dorsally. Genitalia as in Figs 68–71; epandrial lobes short and broadly rounded distally; gonostylus thickset and covered with small setae; aedeagus with long basal stalk and large, bulbous, membranous tip.



Figs 68–71. *Neolophonotus brevicauda* sp. n. holotype male genitalia. 68. Lateral. 69. Dorsal. 70. Ventral. 71. Detail of aedeagus.

Paratype: 1 ♂ similar to holotype.

Material examined: SOUTH AFRICA: *Cape Province:* 1 ♂ (holotype), 30 km SW of Kuruman (2723CA), 24.iii.1982, sandy area/few shrubs, Londt & Schoeman (NM); 1 ♂ (paratype), 50 km SW of Kuruman (2723CA), 24.iii.1982, Acacia woodland area, Londt & Schoeman (NM). NM Type No. 2980.

Distribution: Northern Steppe region of Cape Province of South Africa.

Neolophonotus lawrencei sp. n.

Figs 72–74

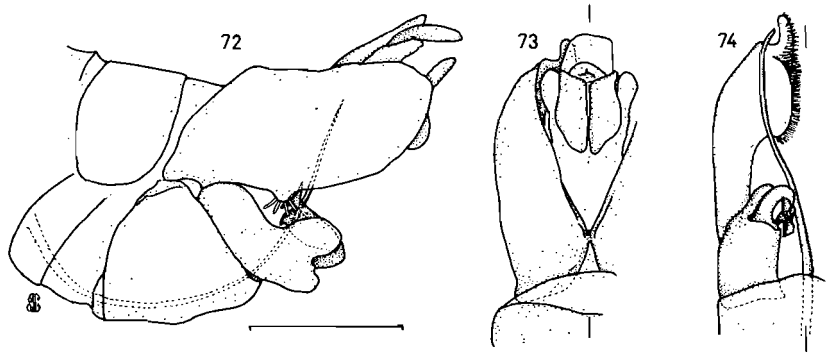
Derivation: Named for Dr R. F. Lawrence, formally of SAM and a previous director of NM, who collected some of the types.

Description: Based on holotype ♂.

Head: Antenna dark red-brown; scape and pedicel with yellow-white setae dorsally, black and yellow-white setae ventrally (few yellow-white on pedicel). Eye:face ratio 1:0,21; eye:lower facial margin ratio 8,9:1. Mystax black and yellow-white (yellow-white setae are longer than black). Occipital setae: upper—yellow-white and black; central—black and yellow-white; lower—yellow-white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s yellow-white. Mesonotal setae: acr black; dc black *ca.* 7 pairs; pprn absent; 3/3 yellow-white npl; 2/2 yellow-white and black spal; 2/1 black pal; mane well developed, black with white setae laterally. Scutellum with 7 black marginal bristles; disc with yellow-white setae laterally and black setae medially. Wing: 8,5 × 2,8 mm; membrane transparent and colourless. Legs: dark red-brown to black except for tibiae which have orange-brown dorsoproximal parts; cx1 with yellow-white bristles and setae anteriorly; cx3 with 1 white bristle laterally. Hind femur: bristles yellow-white, long setae dark red-brown and white, short setae white (a few dark red-brown).

Abdomen: Dark red-brown. T3 with yellow-white marginal bristles; fine setae yellow-white laterally, black dorsally. Genitalia as in Figs 72–74; epandrial lobes



Figs 72–74. *Neolophonotus lawrencei* sp. n. paratype male genitalia. 72. Lateral. 73. Dorsal. 74. Ventral.

with elongate, setaceous lobes on inside faces apically; gonostylus with complicated distal end; aedeagus long and thin.

Paratypes: 6 ♂ 2 ♀ 1? similar to holotype.

Material examined: SOUTH AFRICA: *Cape Province:* 3 ♂ (holotype & paratypes), Aughrabies Falls (2820CB) Kenhardt Div., 9.v.1334 (ie. 1934), Lawrence (SAM, NM); 1 ♂ 2 ♀ 1? (paratypes), Dikbome Koup, Laingsburg (3320BB) Div., iv–v.1950, Zinn (SAM); 1 ♂ (paratype), 75 km N Springbok (2917BC), 12.ix.1983, Whitehead (SAM). NAMIBIA: 2 ♂ (paratypes), Noachabeb 97, Keetmanshoop SE2718AD/BC, 22–28.iv.1972 (SMW). SAM Type No. 3880 (holotype) 3881 (paratypes). NM Type No. 2981. SMW Type No. 670.

Distribution: Northern and southern Cape Province of South Africa.

Neolophonotus nigriseta sp. n.

Figs 75–77

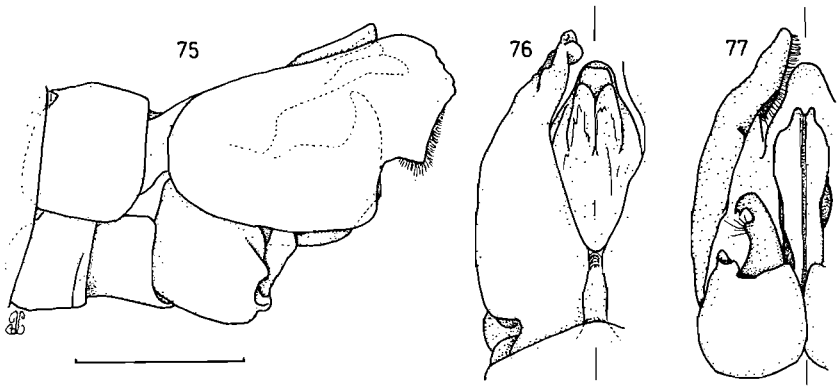
Derivation: L. *niger* = black, + seta.

Description: Based on holotype ♂.

Head: Antenna black; scape and pedicel with black setae. Eye:face ratio 1:0,38; eye:lower facial margin ratio 5,7:1. Mystax black and yellow-white. Occipital setae: upper and central—black and yellow-white; lower—white. Proboscis and palpi dark red-brown.

Thorax: ktg s and mtanepst s black. Mesonotal setae: acr black; dc black *ca.* 10 pairs; pprn absent; 3/3 black npl; 3/3 black spal; 2/2 black pal; mane black, well developed. Scutellum with 6 black marginal bristles; disc with 6 black bristles and black setae. Wing: 9,1 × 3,2 mm; membrane transparent, brown-yellow stained. Legs: Femora black, rest dark red-brown; cx1 with black and yellow-white bristles and setae anteriorly; cx3 with 3 black bristles laterally. Hind femur: All bristles and setae black.

Abdomen: Dark red-brown; silver pruinose. T3 with *ca.* 4 black marginals and 3 black discal bristle; fine setae all black. Genitalia as in Figs 75–77; epandrial lobes



Figs 75–77. *Neolophonotus nigriseta* sp. n. holotype male genitalia. 75. Lateral. 76. Dorsal. 77. Ventral.

with large dorsodistal lobe equipped with many fine setae on internal face; gonostylus shortish with recurved tip; aedeagus stout with upturned distal end.

Paratype: 1 ♂ similar to holotype.

Material examined: SOUTH AFRICA: *Natal:* 1 ♂ (holotype), Frere (2829DD), 18.ix.1913, D. C. M. Dibben (SAM). BOTSWANA: 1 ♂ (paratype), Nata River, Nata (2026AA), 13.iv.1976, Nat Mus S Rhodesia (NMZ). SAM Type No. 3879.

Distribution: Presently known from Natal, South Africa and north-eastern Botswana.

Neolophonotus schalki sp. n.

Figs 78–80

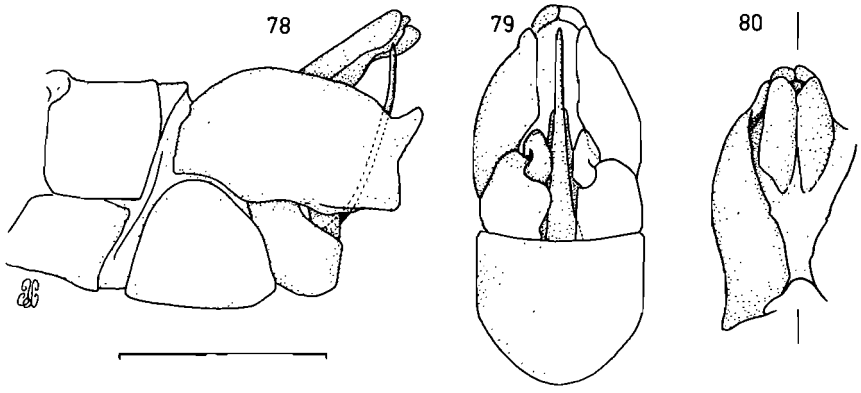
Derivation: Named for Mr Schalk Louw, entomologist at the National Museum, Bloemfontein, who collected the type specimen.

Description: Based on holotype ♂.

Head: Antenna black; scape and pedicel with white setae dorsally, black and white setae ventrally. Eye:face ratio 1:0,21; eye:lower facial margin ratio 8,5:1. Mystax black and white. Occipital setae: upper—black and white; central and lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s yellow-white. Mesonotal setae: acr black; dc black *ca.* 6 pairs; pprn absent; 3/3 yellow and black npl; 2/2 black spal; 1/1 black pal; mane well developed, black with white setae laterally. Scutellum with 4 black marginal bristles; disc with white setae only. Wing: 5,5 × *ca.* 1,6 mm (wing bent); membrane transparent and colourless. Legs: dark red-brown to black; cx1 with white bristles and setae anteriorly; cx3 with 2 white bristles laterally. Hind femur: bristles and long setae dark red-brown and white, short setae white (a few dark red-brown).

Abdomen: Dark red-brown. T3 with *ca.* 3 white marginals and 1 white discal bristle; fine setae white laterally, blackish dorsally. Genitalia as in Figs 78–80; epandrial lobes with blunt apex and upturned apical process; aedeagus long and slender.



Figs 78–80. *Neolophonotus schalki* sp. n. paratype male genitalia. 78. Lateral. 79. Ventral. 80. Dorsal.

Paratype: 1 ♂ similar to holotype.

Material examined: SOUTH AFRICA: *Cape Province:* 2 ♂ (holotype & paratype), Bingap 184, Hay (2822BD), 4–20.ix.1982 (NMB, NM). NM Type No. 2982.

Distribution: Northern Steppe region of the northern Cape Province of South Africa.

Neolophonotus spinicaudata sp. n.

Figs 81–83

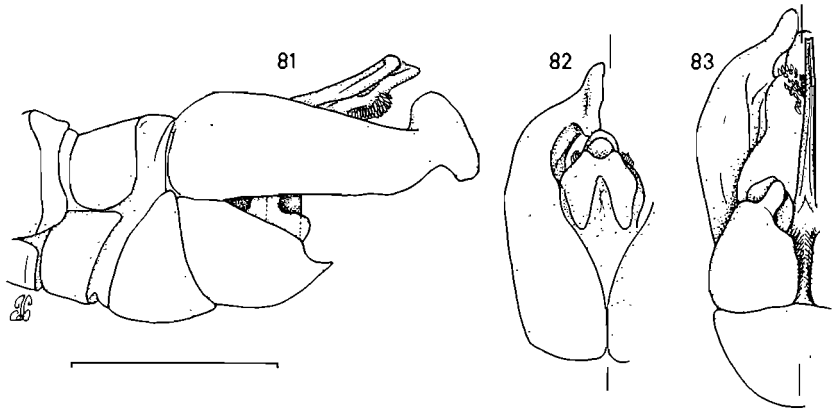
Etymology: L. *spina* = spine, thorn; *cauda* f. = tail. Refers to the fact that the male has a group of setae on the ventral side of the proctiger.

Description: Based on holotype ♂.

Head: Antenna dark red-brown to black; scape and pedicel with black setae dorsally and ventrally. Eye:face ratio 1:0,20; eye:lower facial margin ratio 6,3:1. Mystax black and white mixed. Occipital setae: upper—long, dark red-brown, proclinate; central—black and white; lower—white. Proboscis and palpi dark red-brown.

Thorax: ktg s and mtanepst s white. Mesonotal setae: acr long, black, anteriorly only; dc black, *ca.* 6 pairs, go well anterior of suture; pprn with 1 long white seta (other males have more); 2/2 black npl; 2/2 black spal; 1/1 black pal; mane with long black setae along entire length (bordered by white setae). Scutellum with 4 black marginal bristles; disc with 6 black bristles and long white setae. Wing: 5,5 × 1,7 mm; membrane transparent and colourless. Legs: dark red-brown; cx1 with white bristles and setae anteriorly; cx3 with 1 white bristle laterally. Hind femur: bristles dark red-brown and white, long setae black and white, short setae white (a few dark red-brown ventrally).

Abdomen: Dark red-brown, silver-red pruinose. T3 with 3–4 marginal (white and black) bristles, 1 black or white discal; fine setae long, white laterally, black dorsally on hind margin. Genitalia as in Figs 81–83 (paratype illustrated); epandrial lobe with an expanded tip (in lateral aspect); gonocoxite with a distally projecting



Figs 81–83. *Neolophonotus spinicaudata* sp. n. paratype male genitalia. 81. Lateral. 82. Dorsal. 83. Ventral.

flange; proctiger with a group of well-developed spine-like setae on ventral surface; aedeagus long and thin.

Paratypes: 12 ♂ 8 ♀, similar to holotype.

Material examined: SOUTH AFRICA: *Cape Province:* 11 ♂ (holotype & paratypes) 8 ♀ (paratypes), Richtersveld (2816BD) 40 km S of Ochta Mine, 2.ix.1983, Londt & Stuckenberg, mixed karoo bush with few flowers (NM); 1 ♂ (paratype), Richtersveld (2816DA) 1 km E Grootderm, 2.ix.1983, Londt & Stuckenberg, foot of small hill (NM). NM Type No. 2983.

Distribution: Known only from the Richtersveld (north-west Cape). The species was found resting on the ground in an open area where succulent plants grew.

Neolophonotus squamosus sp. n.

Figs 84–87

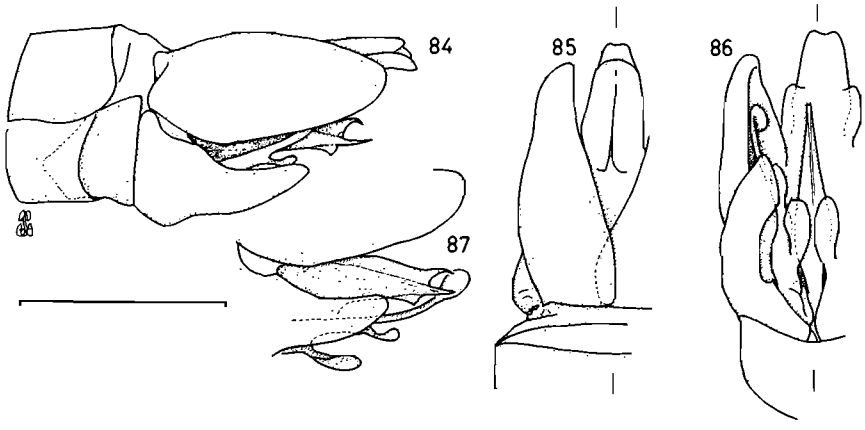
Derivation: L. *squama* = scale. Refers to the scale-like processes on the gonostyli.

Description: Based on holotype ♂.

Head: Antenna dark red-brown; scape and pedicel with black and white setae (few black dorsally). Eye:face ratio 1:0,16; eye:lower facial margin ratio 9,2:1. Mystax black and white. Occipital setae: upper—black; central—black and white; lower—white. Proboscis and palpi dark red-brown.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae: acr black; dc black 6 pairs; pprn absent; 2/2 black npl; 2/2 black spal; 2/2 (1 large, 1 small) black pal; mane well developed, black with bordering white setae. Scutellum with 3 black marginal bristles; disc with 2 black marginal bristles and white setae. Wing: 5,4 × 1,7 mm; membrane transparent and colourless. Legs: dark red-brown to black; cx1 with white bristles and setae anteriorly; cx3 with 2 white bristles laterally. Hind femur: bristles black (a few yellow-white), long setae black and white, short setae white.

Abdomen: Dark red-brown. T3 with 3 white marginals and 4 smallish white discal bristles; fine setae white laterally, blackish dorsally. Genitalia as in Figs 84–87;



Figs 84–87. *Neolophonotus squamosus* sp. n. holotype male genitalia. 84. Lateral. 85. Dorsal. 86. Ventral. 87. Detail of aedeagus.

gonostylus with 2 scale-like processes ventrally; aedeagus with dorsoapical hook-like structure.

Paratypes: 68 ♂ 82 ♀ 3? similar to holotype.

Material examined: SOUTH AFRICA: *Cape Province:* 38 ♂ (holotype & paratypes) 53 ♀ 2? (paratypes), Cookhouse (3225DB), iii.1954, SA Museum (SAM, NM); 2 ♂ (paratypes), Resolution, Grahamstown (3326BC), i–iv.1928, Miss Walton (SAM); 6 ♂ 4 ♀ (paratypes), Gardeners Drift, Adelaide (3226CB), iii.1964, SA Museum (SAM); 3 ♂ 7 ♀ (paratypes), Goshen, nr Cathcart (3227AC), iii.1954, SA Museum (SAM); 13 ♂ 12 ♀ (paratypes), Fort Beaufort 'Umdada' (3226DC), iii.1954, SA Museum (SAM); 3 ♂ 3 ♀ (paratypes), Dunbrody (3325BC) 8 mi SE of Kirkwood, 18.iv.1958, 60 m, Ross & Leech (CAS); 2 ♀ (paratypes), 3 mi SE of Calitzdorp (3321DA), 24.iv.1958, 275 m, Ross & Leech (CAS); 1? (paratype), Perdepoort, 11 mi SE of Greystones (? 3325AC), 19.iv.1958, Ross & Leech (CAS); 1 ♂ (paratype), 17 mi S of Ft. Beaufort (3226DC), 16.iv.1958, Ross & Leech (CAS); 1 ♂ (paratype), Uitenhage (3325CD), De Hoek, 15.iii.1919, Munro (NCI). *O.F.S.:* 1 ♂ (paratype), Bloemfontein (2926AA), 9.iv.1918 (NM); 1 ♀ (paratype), 8 mi N Aliwal North (3026DB), 9.iii.1972, Irwin, 1260 m (NM). SAM Type No. 3884 (holotype) 3885 (paratypes). NM Type No. 2984.

Distribution: Eastern Cape Province of South Africa.

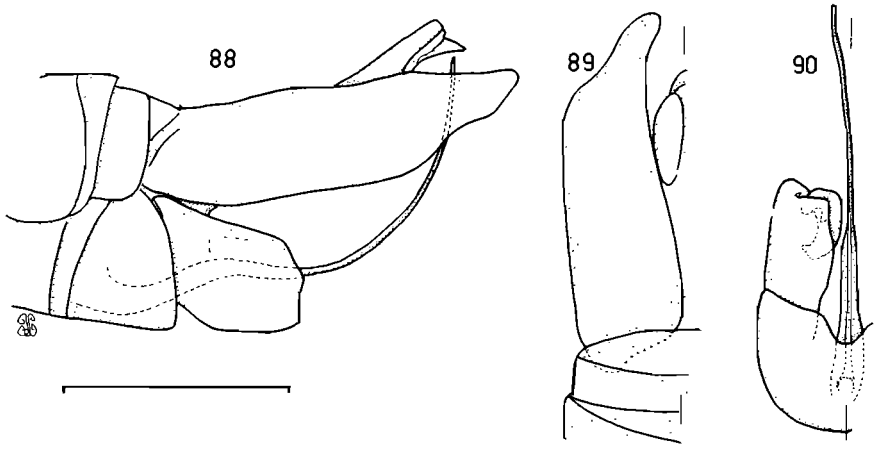
Neolophonotus stevensoni sp. n.

Figs 88–90

Derivation: Named for the collector R. Stevenson.

Description: Based on unique holotype ♂.

Head: Antenna black; scape and pedicel with all setae black. Eye:face ratio 1:0,22; eye:lower facial margin ratio 8,8:1. Mystax black and white. Occipital setae: upper—black; central and lower—white. Proboscis and palpi black.



Figs 88–90. *Neolophonotus stevensoni* sp. n. holotype male genitalia. 88. Lateral. 89. Dorsal. 90. Ventral.

Thorax: ktg s and mtanepst s yellow-white. Mesonotal setae: acr black; dc black *ca.* 5 pairs; pprn absent; 3/3 black (1 yellow) npl; 2/2 black spal; 1/1 black pal; mane well developed, black with few white setae laterally. Scutellum with 4 black marginal bristles; disc with 4 black bristles and white setae. Wing: 7,3 × 2,5 mm; membrane transparent but brown-yellow stained. Legs: dark red-brown to black; cx1 with white bristles and setae anteriorly; cx3 with 1 white bristle laterally. Hind femur: bristles white and dark red-brown, long setae dark red-brown, short setae short white dorsally, long dark red-brown ventrally.

Abdomen: Dark red-brown (greasy). T3 with dark red-brown marginal bristles; fine setae white laterally, black dorsally. Genitalia as in Figs 88–90; epandrial lobes elongate and tapering distally; gonostylus short and bent back behind gonocoxite in lateral view: aedeagus long and thin.

Material examined: ZIMBABWE: 1 ♂ (holotype), Umguza Riv., Bulawayo (2028BA), 21.v.1923, Stevenson (NM). NM Type No. 2985.

Distribution: Known only from south-eastern Zimbabwe.

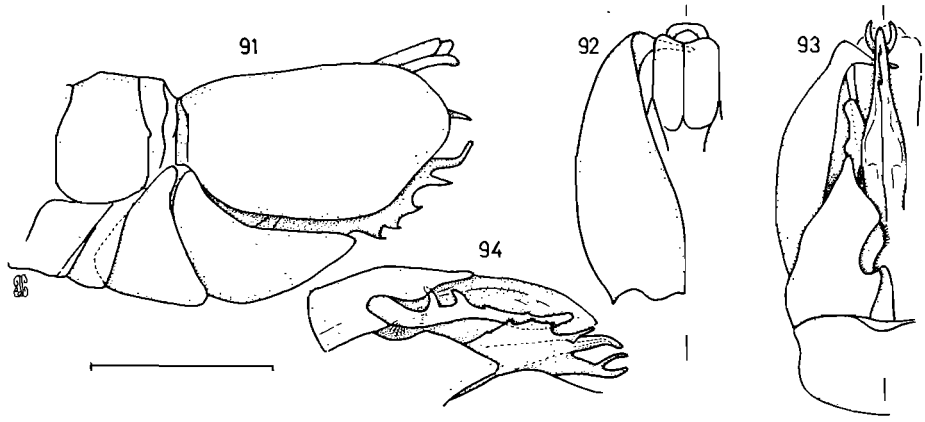
Neolophonotus theroni sp. n.

Figs 91–94

Derivation: Named for Dr J. G. Theron, Head of the Department of Entomology at the University of Stellenbosch, who kindly donated the University's collection of Asilidae to the Natal Museum.

Description: Based on unique holotype ♂.

Head: Antenna dark red-brown; scape with white setae ventrally, black and white dorsally; pedicel with black setae ventrally, black and white setae dorsally. Eye:face ratio 1:0,18; eye:lower facial margin ratio 12,4:1. Mystax black and white. Occipital setae: upper—black and white; central—yellow-white; lower—white. Proboscis and palpi dark red-brown to black.



Figs 91–94. *Neolophonotus theroni* sp. n. holotype male genitalia. 91. Lateral. 92. Dorsal. 93. Ventral. 94. Detail of aedeagus.

Thorax: ktg s and mtanepst s yellow-white. Mesonotal setae: acr black (broken off and lying nearby); dc black *ca.* 8 pairs; pprn absent; 3/3 yellow (1 black) npl; 2/2 black spal; 1/1 black pal; mane well developed, black with white bordering setae. Scutellum with 3 black marginal bristles; disc with 6 black bristles and white setae. Wing: 7,0 × 2,1 mm; membrane transparent and colourless. Legs: dark red-brown to black, dorsoproximal parts of tibiae paler; cx1 with white bristles and setae anteriorly; cx3 with 1 white bristle laterally. Hind femur: bristles and long setae dark red-brown and white, short setae white.

Abdomen: Dark red-brown to black. T3 with few white marginal bristles; fine setae white laterally blackish dorsally. Genitalia as in Figs 91–94; epandrial lobes with rounded distal tips in lateral view, epandrial tip turned inwards at an angle of 90°; style long with two, well-developed barbs near base; aedeagus with thorny appearance in lateral view, and a forked structure dorsally.

Material examined: SOUTH AFRICA: *Cape Province:* 1 ♂ (holotype), Stellenbosch (3318DD), xi.1965, W. J. Louw. NM Type No. 2986.

Distribution: Known only from the type-locality in the winter-rainfall region of the south-western Cape.

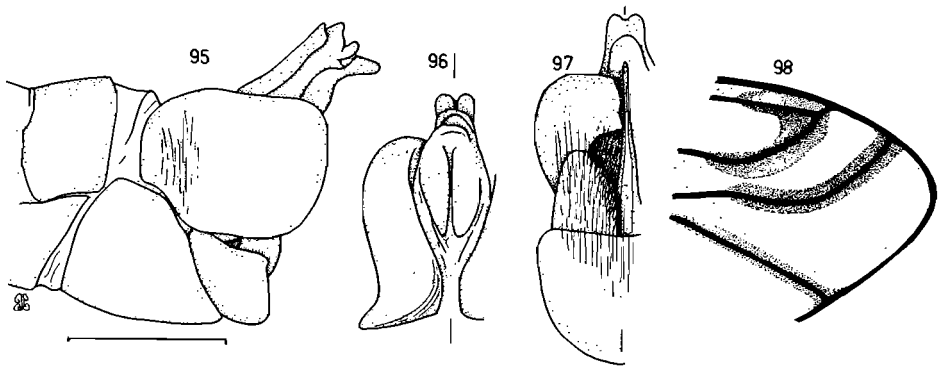
Neolophonotus truncatus sp. n.

Figs 95–98

Derivation: L. *truncatus*—cut off, shortened. Refers to the rather blunt appearance of the male terminalia.

Description: Based on unique holotype ♂.

Head: Antenna dark red-brown to black, scape and pedicel yellow-brown; scape with black and white setae, pedicel with all setae black. Eye:face ratio 1:0,21; eye:lower facial margin ratio 9,0:1. Mystax black and white. Occipital setae: upper— black; central—black; lower—white. Proboscis and palpi dark red-brown to black.



Figs 95–98. *Neolophonotus truncatus* sp. n. holotype male genitalia. 95. Lateral. 96. Dorsal. 97. Ventral. 98. Wing tip showing shaded areas.

Thorax: ktg s white, major bristles black and white; mtanepst s white, major bristles black. Mesonotal setae: acr black; dc black *ca.* 7 pairs; pprn absent; 3/3 black npl; 2/2 black spal; 1/1 black pal; mane well developed, black. Scutellum with 4 black marginal bristles; disc with two laterally placed clumps of white setae. Wing: 6,9 × 2,2 mm; membrane transparent but brown-yellow stained along the tips of the radial veins (Fig. 98). Legs: dark red-brown to black, pro- and mesothoracic tibiae paler dorsoproximally; cx1 with white bristles and setae anteriorly; cx3 with 1–2 white bristles laterally. Hind femur: all bristles and setae dark red-brown.

Abdomen: Dark red-brown. T3 with 2 dark red-brown discals and 4 dark red-brown marginal bristles; fine setae white except for those along the dorsal midline which are black. Genitalia as in Figs 95–97; epandrial lobes short, with an almost square appearance in lateral view; hypandrium and gonocoxite with tufts of strong setae which obscure long slender aedeagus.

Material examined: NAMIBIA: 1 ♂ (holotype), Kavango, Takuasa, SE 1720Cd, 14–19.viii.1971, H 11078 (SMW). SMW Type No. 692.

Distribution: Known only from northern Namibia.

The *Neolophonotus angustibarbus* species-group

This is a very distinctive group found in virtually all the major climatic regions of South Africa. As yet the group has not been recorded from the Little and Great Karoo (region K) or from the southern Cape coastal belt (region A). Only a single species appears to be confined to the south-western Cape *(angustibarbus)*, while two species occur north of South Africa and Namibia (ie. *rapax* & *zimbabwe*). Virtually all the species in this group are mid-summer fliers (the possible exceptions being *swaensis* and *zimbabwe*) (Table 3).

Most of the species in this group appear very similar and are characterised by the following combination of features: The metacoxae lack lateral bristles (fine setae are, however, present); the postpronotal lobes are setose or bristly (these are often rather short and stubby); the mane is frequently very poorly developed, and usually

TABLE 3

The distribution and seasonal incidence of species belonging to the *Neolophonotus angustibarbus* species-group.

Species	Distribution (Climatic regions)													Seasonal incidence (Months of the year)										
	M	A	K	W	S	SE	E	D	L	H	NT	B	Z	J	F	M	A	M	J	J	A	S	O	N	D
albopilosus	—	—	—	—	*	—	*	*	—	*	*	—	—	*	*	*	*	—	—	—	—	—	—	*	*
angustibarbus	*	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—
culinarius	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	*	*	—	—	—	—	—	—	—	*
fimbriatus	*	—	—	—	*	—	—	*	*	—	—	—	*	*	—	*	*	*	—	—	—	—	—	—	—
gertrudae	—	—	—	—	*	—	—	—	*	*	*	*	*	*	*	*	*	—	—	—	—	—	—	*	*
junodi	—	—	—	—	*	—	—	—	—	—	*	*	—	*	*	*	—	—	—	—	*	—	—	—	*
kalahari	—	—	—	*	—	—	—	—	—	—	—	*	—	—	*	*	*	*	—	—	—	—	—	—	—
nigripes	—	—	—	—	—	—	*	*	*	—	—	—	—	*	*	*	*	—	—	—	—	—	—	—	—
rapax	—	—	—	—	—	—	—	—	—	—	—	—	*	—	*	*	*	—	—	—	—	—	—	—	—
rolandi	—	—	—	—	*	—	—	—	—	*	*	—	—	*	*	*	*	*	—	—	—	—	—	—	—
schoemani	—	—	—	*	*	—	—	—	—	—	—	*	—	—	*	*	—	—	—	—	—	—	—	—	—
swaensis	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—
torridus	—	—	—	—	—	—	—	—	—	—	—	*	—	—	*	*	—	*	—	—	—	—	—	—	—
trilobius	—	—	—	*	*	—	—	—	—	—	—	*	—	—	—	*	*	—	—	—	—	—	—	*	—
zimbabwe	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	*	—
zulu	—	—	—	—	—	—	*	—	*	*	—	—	—	—	*	*	*	*	—	—	—	—	—	—	—

Abbreviations:

M —Mediterranean region of south-western Cape.
A —Southern Cape Coastal region.
K —Little and Great Karoo region.
W —Desert and Poor Steppe region.
S —Southern and Northern Steppe regions.
SE—South-eastern Cape Coastal region.
E —Subtropical region.
D —Drakensberg region.
L —Transvaal Lowveld region.
H —Highveld region.
NT—Northern Transvaal region.
B —Botswana and Northern Namibian region.
Z —Localities north of South Africa and Namibia.

pale in colour (white or yellowish) postsuturally; the anterior part of the mane is either composed of short, loosely arranged, dark setae or is absent (in one species—*torridus*—there is no trace of a mane).

Available biological data strongly suggest that all the species are associated with grassland. Certainly all the species collected by me were taken from open grassland situations. Individuals rest on grass-stalks and are only infrequently found resting on the ground.

Key to the species of the *Neolophonotus angustibarbus* species-group (males only)

1 A few black, well-developed presutural acrostichal bristles present 2
— Acrostichals absent (or not clearly differentiated from setae of mane or mesonotal vestiture) 6

2 Postpronotal lobe with fine long thin setae 3
— Postpronotal lobe with short stubby setae 4

3 Bristles of scutellar margin white ..... **junodi** sp. n.
— Bristles of scutellar margin black ..... **swaensis** sp. n.

4 Dorsal occipital bristles only gently proclinate and yellow in colour ..... **kalahari** sp. n.
— Dorsal occipital bristles clearly proclinate and predominantly black 5

5 Male with medial hypandrial process laterally flattened ..... **albopilosus** (Ricardo, 1920)
— Male hypandrial process dorsoventrally flattened ..... **fimbriatus** Hull, 1967

6 Postpronotal setae long and thin ..... **rapax** (Ricardo, 1920)
— Postpronotal setae short and stubby 7

7 Dorsal occipital bristles shortish, black, not obviously proclinate; mane entirely wanting ..... **torridus** sp. n.
— Dorsal occipital bristles longish and clearly proclinate; mane at least poorly developed postsuturally 8

8 Mane in posterior part with a number of black setae (white setae may also be present) 9
— Mane in posterior part entirely yellow or white 11

9 Mystax almost entirely yellow (a few black setae are present laterally on lower facial margin) 10
— Mystax with mixed black and white setae..... **angustibarbus** (Loew, 1858)

10 Mane moderately well developed; bristles of abdominal tergites, katatergite and metanepisternum black ..... **culinarius** sp. n.
— Mane poorly developed (confined to a few loosely arranged setae posteriorly); bristles of tergites, katatergite and metanepisternum pale yellow-white **schoemani** sp. n.

11 All mesonotal bristles black; mesonotal pruinosity reddish; hypandrial process wanting ..... **zimbabwe** sp. n.
— At least some mesonotal bristles yellow; mesonotal pruinosity golden; hypandrium with median process (weakly developed in *rolandi*) 12

12 Epandrial lobes longish, strongly hooked inwards (often overlapping at the tips) when viewed from above 13
— Epandrial lobes shortish, not clearly inwardly hooked and never overlapping at tips 14

13 Tips of epandrial lobes narrowly rounded (ie. rather pointed). ..... **nigripes** (Ricardo, 1920)
— Tips of epandrial lobes broadly rounded (ie. rather clublike) ... **rolandi** sp. n.

14 Epandrial lobes rather long and distinctly pointed apically ..... **zulu** sp. n.
— Epandrial lobes rather short and without a pointed apex 15

15 Mane in posterior part quite well developed; hypandrium with a median trilobed process; gonocoxite without a ventrally directed peglike process but with strong bristles..... **trilobius** sp. n.
— Mane in posterior part poorly developed; hypandrial process simple; gonocoxite with a small peglike, ventrally directed process midway along hind margin (lateral view) and lacking strong bristles ..... **gertrudae** sp. n.

Neolophonotus albopilosus (Ricardo, 1920)

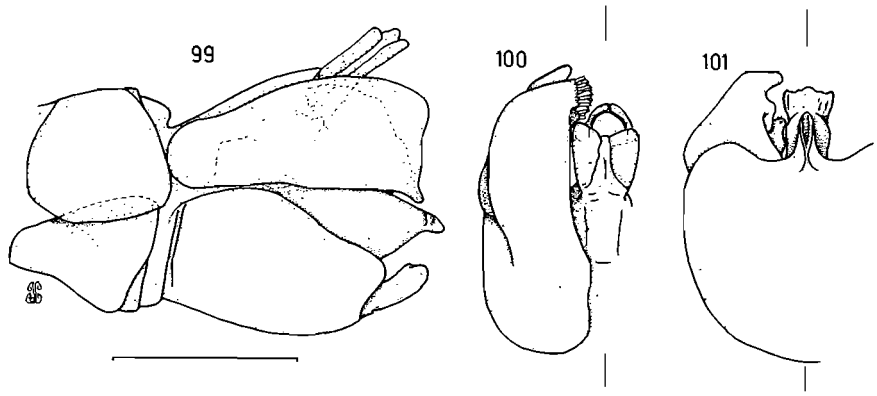
Figs 1, 99–101

Dysmachus albopilosus Ricardo, 1920:437–8.
Neolophonotus (Lophopeltis) albopilosa; Engel, 1927:171–2.

Redescription: Based on lectotype ♂.

Head: Antenna dark red-brown to black; scape and pedicel with black setae (a few white on dorsal part of scape). Eye:face ratio 1:0,26; eye:lower facial margin ratio 6,8:1. Mystax pale yellow with fine black setae laterally and on lower facial margin. Occipital setae: upper—black; central—pale yellow; lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s yellow-white. Mesonotal setae: acr black, weakly developed; dc black *ca.* 8 pairs; pprn tiny yellow; 2/2 yellow and black npl; 2/2 black and yellow spal; 2/2 yellow pal; mane poorly developed anteriorly (tiny black setae like those of general surface of scutum) pale yellow behind suture (loosely arranged). Scutellum with 3 yellow marginal bristles; disc with yellow-white setae only. Wing: 8,6 × 3,0 mm; membrane transparent and colourless. Legs: dark red-brown to black; cx1 with white bristles and setae anteriorly; cx3 with no bristles laterally. Hind femur: bristles black and yellow, long and short setae pale yellow.



Figs 99–101. *Neolophonotus albopilosus* (Ricardo, 1920) lectotype male genitalia. 99. Lateral. 100. Dorsal. 101. Ventral.

Abdomen: Dark red-brown, silver-gold pruinose. T3 with 3 yellow marginals and 1 yellow discal bristle; fine setae all yellow. Genitalia as in Figs 99–101; epandrial lobe with blunt apex equipped with short, stout black setae; aedeagus shortish and thickset in ventral view; hypandrium with a central, laterally compressed, finger-like process.

Paralectotypes: 4 ♂ 2 ♀ similar to holotype.

Lectotype designation: Ricardo mentioned specimens from Howick, Willow Grange and Estcourt but did not record how many from each place. As she indicates both a male and a female as 'types' I conclude that no holotype was actually designated, and that all the specimens studied by her must be considered

syntypes. I have studied all the material in the BM and have decided that only those with the above localities can be considered as part of the type series. I hereby designate one of the males from Howick as the lectotype and the other material (listed below) as paralectotypes.

Variation: Minimal variation in number and colour of major bristles. Female similar to male.

Material examined: SOUTH AFRICA: *Natal:* 4 ♂ 2 ♀ (lectotype & paralectotypes), Howick (2930AC), Cregoe (2 ♂ 1 ♀ not with collector's name)(BM); 1 ♂ (paralectotype), Estcourt (2829DD), 11/96 (= xi.1896) (BM); 1 ♂ (paralectotype) Willow Grange (2929BB), 12.i.1914, Wroughton (BM); 2 ♂, Will Brook (2929BB), 26.i.1914 & 27.i.1914 (BM); 2 ♂, Willow Grange, Mooi River (2929BB), 17.xii.1913, Wroughton (ZSM); 2 ♀, Estcourt (2829DD), 26.ii.1913, Wroughton (ZSM); 4 ♀, Natal National Park (2828DB), iii.1932 (BM); 1 ♂, Ingogo (2729DB), iii.1932 (BM); 1 ♂, Ashburton (2930CB), 8–11.ii.1977, Londt, ex malaise (NM); 1 ♂, Ashburton (2930CB) 15 km SE Pietermaritzburg, 19–25.ii.1977, Londt, malaise in grassland (NM); 1 ♂, 5 km SE Ashburton (2930CB), 13.i.1980, Miller & Stabbins, grassland (NM); 2 ♂ 1 ♀, Camperdown (2930DA), 14.iv. & 11.xii.1908, Leigh (NM); 3 ♂, Estcourt (2829DD), 12/96 (xii.1896) (NM); 2 ♂, Umgeni Valley Ranch (2930AC) 1 km N Howick, 29.ii.1980, Miller & Stabbins, dense grassy hillside (NM); 2 ♂ 1 ♀, Ramsgate (3030CD), 8–17.i.1982, Londt (NM); 1 ♂, Mhlopeni Nat Reserve (2930AB), 8.iv.1983, Londt, Barraclough & Seymour, thornveld (NM); 1 ♂, Inchanga (2930DA), 7.iii.1977, Ali (DM). 1 ♂, Doonside (3030BB), 20.xii.1916, Bevis (DM); 3 ♂ 2 ♀, Josephines Bridge (3030AA), 20.xii.1984, Londt (NM). *Transvaal:* 1 ♂, Pretoria (2528CA), iii.1947, T. B. (NM); 2 ♂, Pretoria (2528CA), 11.iii.1906, Swierstra (NM); 2 ♂ 1 ♀, Pretoria (2528CA), 10.ii.1915, Roberts (NM); 1 ♂, Pretoria, 11.iii.1906, Swierstra (ZSM); 1 ♀, Waterkloof (Pretoria 2528CA), xii.1914, Roberts (NM); 1 ♂, Pretoria (2828CA) Derdepoort, i.1961, van Schalkwyk (NCI); 1 ♂, Cullinan (2528DA), 3.ii.1943, van Heerden (NM); 1 ♂, Rustenburg (2527CA), iii.1973, Schlotfeldt (NM); 1 ♂, Roosevelt Park (Johannesburg 2628AA), 30.iii.1968, Biggs (NM); 1 ♂ 1 ♀, Lydenburg (2530AB), 1896, Krantz (NM); 1 ♂ 2 ♀, Johannesburg (2628AA) Mondeor, 14.iii.1982, Elferink (NM); 1 ♂ 4 ♀, Halfway House (2528CC), 28.ii.1982, Elferink (NM); 1 ♂, 12 km E Barberton on Saddleback Pass (2531CC), 7.iv.1985, Londt, grassland (NM). *O.F.S.:* 5 ♂ 5 ♀, 10 km E Paul Roux (2828AC), 16.iii.1982, Londt & Schoeman, scrub on rocky hill (NM); 8 ♂ 2 ♀, 30 km W Thaba Nchu (2926BA), 26.iii.1982, Londt & Schoeman, grass/shrubs nr river (NM); 1 ♂, 20 km E Tweespruit (2927AA), 26.iii.1982, Londt & Schoeman, rocky hill/grassveld (NM); 1 ♂, Senekal (2827BC), 5.ii.1964, van Schalkwyk (NCI); 1 ♂, Bloemfontein (2926AA), 25.iii.1918 (NCI); 1?, Smithfield (3026BA) Oranjie, 1910, Kannemeyer (SAM). *Cape Province:* 1 ♀, Kimberley (2824DB), 11/96 (= xi.1896) (BM); 1 ♂ 1 ♀, Kimberley (2824DB), 12/96 (= xii.1896) (NM); 3 ♂, Gardiner's Drift, Adelaide (3226CB), iii.1954, SA Mus (SAM); 1 ♂, Goshen nr. Cathcart (3227AC), iii.1954 (SAM); 1 ♂, Fort Beaufort (3226DC), 'Umdada', iii.1954 (SAM). TRANSKEI: 1 ♂, 22 mi W Cofimvaba (3127DC), 14.iv.1958, Ross & Leech, 940 m (CAS). LESOTHO: 1 ♂, Leribe (2828CC), 12.iii.1956,

Bevis (DM); 1 ♂, nr Posong (?), 8.i.1953, Bevis (DM); 1 ♀, Mahlatsa's (2927BB), 1.i.1953, Bevis (DM); 1 ♀, nr Mamathe's (2927BB), 11.iii.1956, Bevis (DM).

Previously recorded material: Apart from the material recorded by Ricardo (1920) the only other published records are those given by Engel (1927): Willow Grange, Mooi River, Estcourt, Pretoria, Platrivier, Waterberg Dist., Mount Grove, Camperdown, Warmbath and Lydenburg. Engel, who published an excellent illustration of the male genitalia, probably identified his specimens correctly. His localities fall well within the distribution as I know it.

Prey record: A male from Thaba Nchu was collected with a small bee (Hymenoptera).

Distribution: Widespread in the open grassland areas of Natal, Transvaal, Orange Free State, Lesotho, Transkei, eastern and north-eastern Cape Province.

Neolophonotus angustibarbus (Loew, 1858)

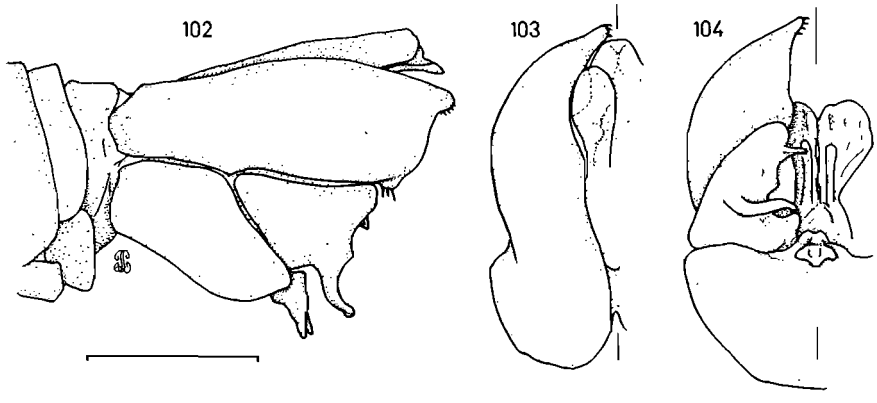
Figs 102–104

Lophonotus angustibarbus Loew, 1858:365. Loew, 1860:161–2.

Redescription: Based on holotype ♂.

Head: Antenna dark red-brown to black; scape and pedicel with black setae (a single white one on scape). Eye:face ratio 1:0,22; eye:lower facial margin ratio 7,7:1. Mystax pale yellow with many black setae laterally and on lower facial margin. Occipital setae: upper—black; central—pale yellow; lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s brown-yellow. Mesonotal setae: acr wanting; dc black *ca.* 5 postsutural pairs; pprn tiny yellow, a few black; 2/2 black npl; 3/3 black spal; 2/2 black pal; mane poorly developed anteriorly (tiny black setae like those of general surface of scutum) weak black behind suture (loosely arranged). Scutellum with 4 black marginal bristles; disc with white setae (a few black ones centrally). Wing: 10,0 × 3,3 mm; membrane transparent and colourless. Legs: femora dark



Figs 102–104. *Neolophonotus angustibarbus* (Loew, 1858) holotype male genitalia. 102. Lateral. 103. Dorsal. 104. Ventral.

red-brown, rest yellow-brown (proximal parts of tibiae a little paler); cx1 with white bristles and setae anteriorly; cx3 with no bristles laterally. Hind femur: bristles black and yellow, long and short setae white.

Abdomen: Dark red-brown, silver-gold pruinose. T3 with 5 yellow marginals and 3 yellow discal bristles; fine setae yellow laterally, black dorsally. Genitalia as in Figs 102–104; gonostyle with long, slightly curved, ventral process; aedeagus shortish and thickset in ventral view; hypandrium with a central bifurcate process.

Variation: Although Loew (1860) indicates that he saw at least one specimen of each sex, I know of only two male specimens of this species. The Swellendam male matches Loew's type.

Material examined: SOUTH AFRICA: *Cape Province:* 1 ♂ (holotype), Cap. B. Sp., Tollin, 10276 (ZMB); 1 ♂, Swellendam (3420AB), 6.ii.1978, Coetzee (NM).

Distribution: Known only from the south-western Cape.

Neolophonotus culinarius sp. n.

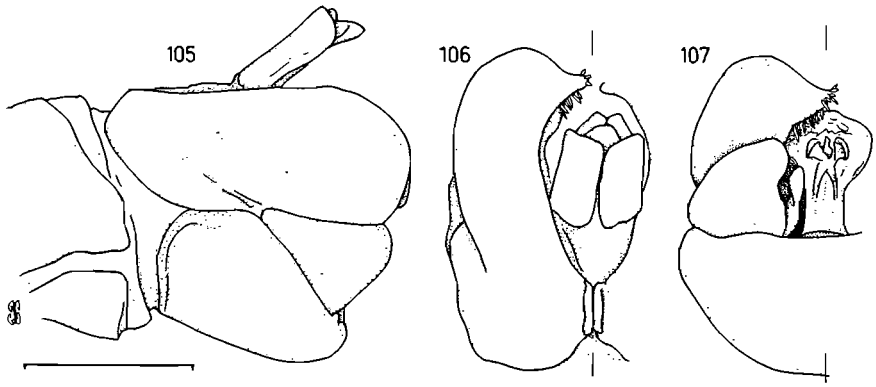
Figs 105–107

Etymology: L. *culinarius* = of the kitchen; a reference to the name of the type locality (Cookhouse).

Description: Based on holotype ♂.

Head: Antenna dark red-brown; scape and pedicel with black and white setae. Eye:face ratio 1:0,25; eye:lower facial margin ratio 4,6:1. Mystax yellow (black on lower facial margin). Occipital setae: upper—long, black, proclinate; central — orange; lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s black (bristles) white (setae), mtanepst s black (bristles) but a few white (setae). Mesonotal setae: acr absent; dc black, *ca.* 10 pairs, go well anterior of suture; pprn small white; 3/3 black npl; 3/3 black spal; 4/4 yellow pal; mane weak black anteriorly (almost absent) stronger black and white posteriorly. Scutellum with 11 black marginal bristles, disc with long black and white setae. Wing:



Figs 105–107. *Neolophonotus culinarius* sp. n. holotype male genitalia. 105. Lateral. 106. Dorsal. 107. Ventral.

9,5 × 3,2 mm; membrane slightly yellowish (due to microtrichia). Legs: robust, dark red-brown, dorsoproximal parts of tibiae paler; cx1 with pale yellow to white bristles and setae anteriorly; cx3 with fine white setae only (no bristles). Hind femur: bristles black (few orange), long setae dark red-brown and white, short setae white (few black dorsally).

Abdomen: Dark red-brown, gold-red pruinose. T3 with 3–4 black marginals and *ca.* 6 weak black discal bristles; fine setae mostly black, white anteriorly across whole width. Genitalia as in Figs 105–107; epandrial lobe rather bulbous; gonostylus short; aedeagus large, with a bulbous, membranous tip.

Paratypes: 6 ♂ 11 ♀, females differ slightly from males in that there are no black setae in the mystax; there are a few orange bristles on the upper occiput.

Material examined: SOUTH AFRICA: *Cape Province:* 1 ♂ (holotype) 4 ♂ 9 ♀ (paratypes), Cookhouse (3225DB), iii.1954, S. A. Museum (SAM & NM); 1 ♀ (paratype), Dunbrody (3325BC), 12.iii.1912 (ZSM); 1 ♂ (paratype), Fort Brown (3326BA), Miss Brown (AM); 1 ♂ (paratype), Fort Brown (3326BA), 17.iv.1929, Miss Walton (AM); 1 ♀ (paratype), Grahamstown (3326BC) Hilton, 6.xii.1964, Jacot-Guillarmod (AM). SAM Type No. 3887 (holotype) 3888 (paratypes). NM Type No. 2987.

Distribution: Known only from the Southern Steppe region of the eastern Cape Province.

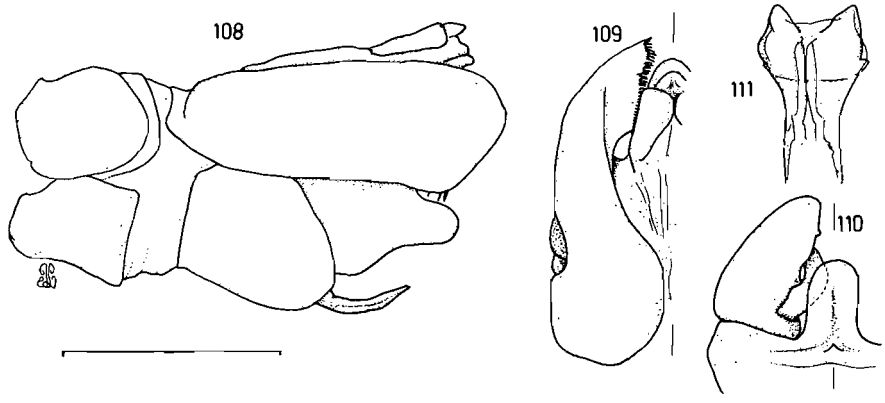
Neolophonotus fimbriatus Hull, 1967.

Figs 108–111

Neolophonotus (Lophopeltis) fimbriatus Hull, 1967:271–2.

Redescription: Based on holotype ♂.

Head: Antenna dark red-brown to black; scape and pedicel with black setae (a single yellow one on scape). Eye:face ratio 1:0,23; eye:lower facial margin ratio 7,9:1. Mystax pale yellow with shortish black setae laterally. Occipital setae: upper—black; central—pale yellow; lower—white. Proboscis and palpi dark red-brown.



Figs 108–111. *Neolophonotus fimbriatus* Hull, 1967 holotype male genitalia. 108. Lateral. 109. Dorsal. 110. Ventral. 111. Detail of aedeagus.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae: acr few, black, well-developed anteriorly; dc *ca.* 9 pairs black, go well anterior of suture; pprn tiny yellow; 2/2 black (1 yellow on left side) npl; 3/3 black and yellow spal; 2/2 yellow pal; mane moderately well developed, black anteriorly, and white, quite well developed behind suture (loosely arranged). Scutellum with 6 yellow marginal bristles; disc with long yellow setae. Wing: 8,7 × 2,8 mm; membrane transparent and colourless. Legs: dark red-brown to black; cx1 with white bristles and setae anteriorly; cx3 with no bristles laterally. Hind femur: bristles short yellow, long and short setae white.

Abdomen: Dark red-brown, silver-gold pruinose, terga with reddish hind margins. T3 with 4 shortish yellow marginals and 2 yellow discal bristles; fine setae yellow laterally, black dorsally. Genitalia as in Figs 108–111; similar to *albopilosus* but gonostyle not so acutely pointed; aedeagus shortish and thickset in ventral view; hypandrium with a central dorsoventrally flattened, broad process.

Variation: Although the type locality is far removed from other localities listed below, the male genitalia of this species are distinctive and leave little doubt that specimens from Natal, O.F.S., Transvaal and Zimbabwe are conspecific. Other morphological features vary only insignificantly.

Material examined: SOUTH AFRICA: *Cape Province:* 1 ♂ (holotype), Dassen Island (3318AC) 40 mi NNW Cape Town, 24.i.1951, Swedish Exp Brink & Rudebeck, No. 158 (ZIL). *Natal:* 3 ♂ 2 ♀, Cathedral Peak Forestry Reserve (2829CC), iii.1959, Stuckenberg, 5500–6000 ft, little berg summits, *Themeda* grasslands (NM); 5 ♂, Cathedral Peak area (2829CC), forest reserve, 4–11.iv.1977, Londt, 1800 m (NM); 2 ♂ 1 ♀, same data but 7–12.iv.1982 (NM). *Transvaal:* 2 ♂, Pretorius Kop (2531AB), 22.iii.1952, Janse & Vari (NM). *O.F.S.:* Bloemfontein (2926AA), 5.iv.–20.v.1975, Mus Staff (NMB). ZIMBABWE: 1 ♂, Hillside (Harare 1731CC), 20.i.1923, Swinburne & Stevenson (NM).

Distribution: The species has a wide distribution from the south-western Cape, along the eastern parts of South Africa and north into Zimbabwe.

Neolophonotus gertrudae sp. n.

Figs 112–114

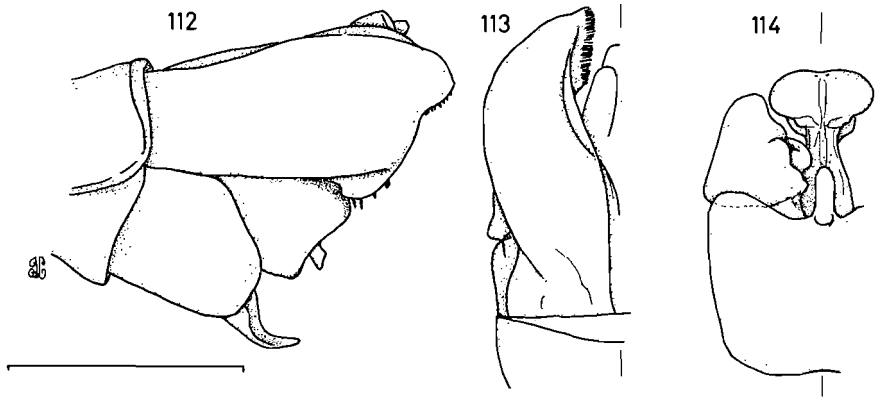
Derivation: Named for Miss Gertrude Ricardo who did excellent pioneering work on *Neolophonotus*.

Description: Based on holotype ♂.

Head: Antenna black; scape and pedicel with black setae (a single yellow one on scape). Eye:face ratio 1:0,22; eye:lower facial margin ratio 6,4:1. Mystax pale yellow with slender, shorter black setae laterally. Occipital setae: upper—black; central—pale yellow; lower—white. Proboscis and palpi dark red-brown.

Thorax: ktg s and mtanepst s yellow-white. Mesonotal setae: acr wanting; dc *ca.* 7 pairs black, go well anterior of suture; pprn tiny black and yellow; 2/2 black npl; 2/2 black spal; 2/2 black and yellow pal; mane absent anteriorly, white, quite well developed behind suture (loosely arranged). Scutellum with 4 yellow-white

marginal bristles; disc with yellow-white setae. Wing: 6,1 × 1,9 mm; membrane transparent and colourless. Legs: dark red-brown with proximal parts of tibiae paler; cx1 with white bristles and setae anteriorly; cx3 with no bristles laterally. Hind femur: bristles black and yellow-white, long setae white and black, short setae white, a few quite long.



Figs 112–114. *Neolophonotus gertrudae* sp. n. holotype male genitalia. 112. Lateral. 113. Dorsal. 114. Ventral.

Abdomen: Dark red-brown, gold pruinose. T3 with 2 pale yellow marginal bristles; fine setae yellow laterally, black dorsally. S3 with 3 yellow bristles posteriorly and fine moderately long yellowish setae. Genitalia as in Figs 112–114; similar to *albopilosus* but gonocoxite blunt and with a small projection centrally (in lateral view).

Paratypes: 41 ♂ 21 ♀. Agree well with holotype. Scape may have a few white setae; some scutellar bristles may be black; T3 may have a single yellowish discal bristle.

Material examined: SOUTH AFRICA: *Transvaal:* 1 ♂ 1 ♀ (holotype & paratype), Loskopdam Nature Reserve area (2529AD), 24.i.1978, Londt, bushveld near river (NM); 1 ♂ (paratype), 20 km N Potgietersrus (2429AA) road to Makapans mts, 27.i.1978, Londt, long grass under trees nr river (NM); 4 ♂ 3 ♀ (paratypes), 15 km E Rooiberg (2427DD), 1.ii.1978, Londt, grassland (NM); 1 ♂ (paratype), 2527Ca (near Rustenburg), iii.1977, Dreyer (NM); 2 ♂ 1 ♀ (paratypes), Magaliesberge, Buffelspoortdam area (2527CD), 2.ii.1978, Londt, long grass (NM); 2 ♂ (paratypes), 6 km N Vivo (2229CC), 23–24.ii.1980, Londt, bushveld vegetation & old lands (NM); 2 ♂ 1 ♀ (paratypes), Soutpan (2229CD) Soutpansberge, 23–24.ii.1980, Londt & Schoeman, bushveld vegetation (NM); 1 ♂ (paratype), Warmbath (2428CD), xii.1910, van Niekerk (NM); 1 ♀ (paratype), Apel (2429BD), 7.iii.1979, Meiswinkel, on rocks 5 pm. (NM); 1 ♂ (paratype), Klipfontein (2428AB), 11.xii.1979, Nat Mus Falc Coll Exp (NMZ); 1 ♂ (paratype), 15 mi SW Potchefstroom (2627CA), 22.iii.1971, Holm (NCI); 1 ♂ (paratype), Barberton (2531CC), iii.1979, Harrop (NCI); 1 ♂ (paratype), Middelburg (2529CD), 18.ii.1969, Strydom (NCI); 1 ♀ (paratype), Coligny (2626AD),

7.ii.1969, van Schalkwyk (NCI); 1 ♂ (paratype), P.P.Rust (= Potgietersrus 2429AA), 4.i.1921 (NCI); 1 ♂ (paratype), Junction Crocodile & Marico Rivers (*ca.* 2527BA), Tucker, ii.1916 (SAM); 5 ♂ 2 ♀, Kruger National Park, vicinity of Skukuza (2431DC), 9–12.iv.1985, Londt, Bushveld (NM); 1 ♂, 5 km N Barberton (2531CC), 6.iv.1985, Londt, rocky slope—grass (NM). *O.F.S.:* 3 ♂ 2 ♀ (paratypes), 46 km W Bloemfontein (2925BB), 26.iii.1982, Londt & Schoeman, gentle slope with rocks shrubs and grass (NM). *Cape Province:* 9 ♂ 5 ♀ (paratypes), 60 km W Kimberley (2824CC), 25.iii.1982, Londt & Schoeman, Acacias/grass/sand (NM); 4 ♂ 4 ♀ (paratypes), 35 km W Kimberley (2824CB), 17.iii.1982, Londt & Schoeman, Acacias/grass/sand (NM); 1 ♂ (paratype), Vryburg (2624DC), Brown, xi.1919 (SAM). ZIMBABWE: 1 ♂ 1 ♀ (paratypes), Matopos National Park (2028AD), i.1977, Fox (NM). NAMIBIA: 1 ♂ (paratype), Kaoko Otavi (1813BC), iii.1926, Mus Exp (SAM); 1 ♂ (paratype), Kamanyab (1914DB), iii.1925, Mus Exp (SAM); 1 ♂ 1 ♀ (paratypes), 51 km S Aroab (2619DC), 11.iv.1980, Whitehead (SAM). NM Type No. 2988. SAM Type No. 3886 (paratypes).

Distribution: From the north-western Cape, through the O.F.S. and Transvaal into southern Zimbabwe.

Neolophonotus junodi sp. n.

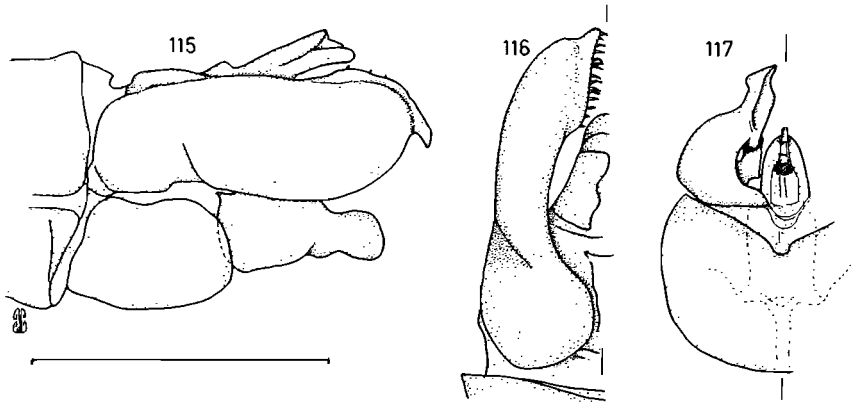
Figs 115–117

Etymology: Named after the Rev Junod who first collected this species.

Description: Based on holotype ♂.

Head: Antenna black; scape and pedicel with black setae. Eye:face ratio 1:0,27; eye:lower facial margin ratio 9,4:1. Mystax black in upper two-thirds, yellow in lower third and along lower facial margin. Occipital setae: upper—black; central—yellow; lower—white-yellow. Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s white-yellow. Mesonotal setae: acr few black, anteriorly weakly developed; dc black *ca.* 6 pairs a few anterior to suture; pprn tiny



Figs 115–117. *Neolophonotus junodi* sp. n. holotype male genitalia. 115. Lateral. 116. Dorsal. 117. Ventral.

yellow; 2/2 yellow-white and black npl; 2/2 yellow-white spal; 1/1 yellow pal; mane very poorly developed anteriorly (few black setae) pale yellow behind suture (loosely arranged). Scutellum with 2 yellow-white marginal bristles; disc with sparse yellow-white setae only. Wing: 5,8 × 1,9 mm; membrane transparent and colourless. Legs: dark red-brown; cx1 with white bristles and setae anteriorly; cx3 with no bristles laterally. Hind femur: bristles black and yellow-white, long and short setae yellow-white.

Abdomen: Dark red-brown, reddish-gold pruinose. T3 with 2 yellow marginal bristles; fine setae all yellow. Genitalia as in Figs 115–117; epandrial lobes with a small hook-like process at its apex; aedeagus short and pointed at apex in ventral view; gonocoxite with a broadly rounded apex in ventral view; hypandrium with a small central indentation (in ventral view).

Paratypes: 9 ♂ 9 ♀ similar to holotype.

Material examined: SOUTH AFRICA: *Transvaal:* 1 ♂ 1 ♀ (holotype & paratype), Northam (2427CC), 1.ii.1978, Londt, long grass/trees (NM); 2 ♀ (paratypes), Bulge River (2427BA), 30.i.1978, Londt, open grassveld area (NM); 1 ♂ 1 ♀ (paratypes), Doorndraai Dam Nature Reserve (2428BC), 4–7.ii.1980, Moolman (NCI). *O.F.S.:* 2 ♂ (paratypes), Sandveld Nature Reserve (2725DA), 8–12.ii.1982, Ento Dept (NMB). *Cape Province:* 1 ♀ (paratype), *ca.* 5 km W Hotazel (2722BB), 23.iii.1982, Londt & Schoeman, Acacias/grass/shrubs (NM). BOTSWANA: 5 ♂ 2 ♀ (paratypes), Serowe (2226BC), 24.xii.1982, Forchhammer, MVL bush (NM); 1 ♀ (paratype), same data but 21.viii.1982, day (NM). Unknown locality: 1 ♂ 1 ♀ (paratypes), Cafrerie, Rikatla, 1908, Envoi du Rev Junod (PM). NM Type No. 2989.

Distribution: Transvaal, north-eastern Cape and Botswana.

Neolophonotus kalahari sp. n.

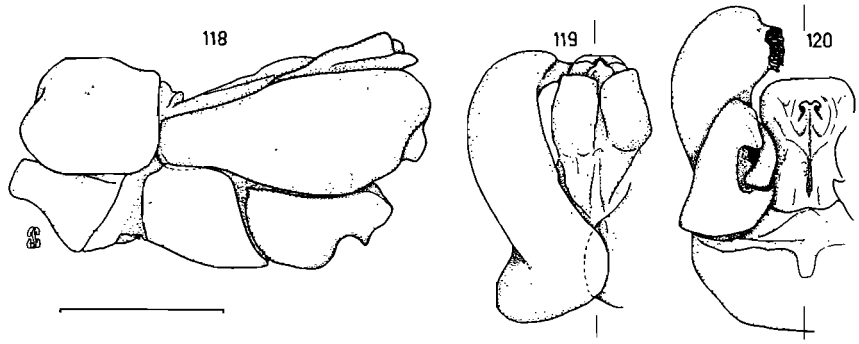
Figs 118–120

Etymology: Named after the region in which the species occurs.

Description: Based on holotype ♂.

Head: Antenna black; scape and pedicel with white setae. Eye:face ratio 1:0,24; eye:lower facial margin ratio 5,3:1. Mystax white with a few black setae on lower facial margin. Occipital setae: upper—yellow; central—yellow; lower—white. Proboscis and palpi black.

Thorax: ktg s and mtanepst s yellow-white. Mesonotal setae: acr absent; dc black *ca.* 6 pairs black and yellow behind suture; pprn tiny yellow-white; 2/2 yellow npl; 2/2 yellow spal; 2/2 yellow pal; mane very poorly developed anteriorly (few tiny yellow and black setae) a good cluster of white setae behind suture. Scutellum with *ca.* 10 yellow marginal bristles; disc with 2 small yellowish bristles and sparse yellow-white setae. Wing: 9,9 × 3,4 mm; membrane transparent and colourless. Legs: femora dark red-brown, dorsal aspect of tibiae and tarsi brown-yellow; cx1 with white bristles and setae anteriorly; cx3 with no bristles laterally. Hind femur: bristles pale yellow (1 black ventrally), long and short setae white and recumbent.



Figs 118–120. *Neolophonotus kalahari* sp. n. holotype male genitalia. 118. Lateral. 119. Dorsal. 120. Ventral.

Abdomen: Dark red-brown, silver-gold pruinose. T3 with 2 yellow marginal and 4 yellow discal bristles; fine setae all yellow-white. Genitalia as in Figs 118–120; epandrial lobes with an inwardly directed process covered with tiny black, squat setae; aedeagus short and broadly rounded at apex in ventral view; gonocoxite with a few very well-developed bristles.

Paratypes: 3 ♂ 7 ♀ similar to holotype.

Material examined: NAMIBIA: 1 ♂ (holotype), Maltahohe Dist, 25 km S Solitaire on Dieprivier Farm (2415BB), 15.ii.1974, Irwin, 1000 m, gravel wash (NM); 1 ♀ (paratype), Rietfontein (2120DC), iv.1933, van Son (NM); 2 ♀ (paratypes), Tsisab Cyn (2114AA) Brandberg Mts, 11.v.1958, Ross & Leech, 550 m (CAS). SOUTH AFRICA: *Cape Province:* 1 ♂ (paratype), 25 km N Noenieput on road to Koopan-Suid (2720AC), 20.iii.1982, Londt & Schoeman, thick vegetation/trees (NM); 1 ♀ (paratype), 20 km N Noenieput (2720AC), 20.iii.1982, Londt & Schoeman, roadside vegetation (NM); 2 ♂ 1 ♀ (paratypes), 35 km WNW Upington (2820BD), 20.iii.1982, Londt & Schoeman, roadside vegetation (NM); 2 ♀ (paratypes), 21 mi W Upington (2820BD), 12.v.1970, Lamoral·(NM). NM Type No. 2990.

Distribution: Namibia and north-western Cape Province.

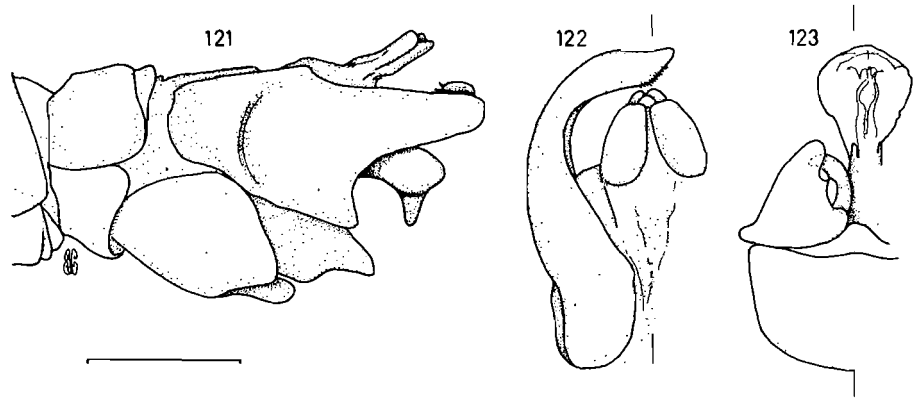
Neolophonotus nigripes (Ricardo, 1920)

Figs 121–123

Dysmachus nigripes Ricardo, 1920:438–9.
Neolophonotus (Lophopeltis) nigripes; Engel 1927:174–5.

Description: Based on lectotype ♂.

Head: Antenna black, but junctions between segments orange-brown; scape and pedicel with shortish black setae, segment 3 with a few tiny golden setae dorsodistally; Eye:face ratio 1:0,25; eye:lower facial margin ratio 4,5:1. Mystax white-yellow with a few black setae in upper part (just below antennae). Occipital setae: upper—black and white-yellow; central—white-yellow; lower—white. Proboscis and palpi dark red-brown to black.



Figs 121–123. *Neolophonotus nigripes* (Ricardo, 1920) lectotype male genitalia. 121. Lateral. 122. Dorsal. 123. Ventral.

Thorax: ktg s and mtanepst s white-yellow. Mesonotal setae: acr absent; dc black *ca.* 6 pairs behind suture; pprn tiny yellow; 3/3 yellow npl; 3/3 yellow spal; 2/2 yellow pal; mane absent anteriorly, a weak cluster of yellow setae behind suture. Scutellum with *ca.* 6 yellow marginal bristles; disc with sparse yellow-white setae. Wing: 9,4 × 3,2 mm; membrane transparent and colourless. Legs: femora black; cx1 with white bristles and setae anteriorly; cx3 with no bristles laterally. Hind femur: bristles pale yellow (bases slightly orange in appearance), long and short setae white.

Abdomen: Dark red-brown, silver-gold pruinose. T3 with 2–3 yellow marginal bristles; fine setae yellow-white laterally, few black dorsally. Genitalia as in Figs 121–123; epandrial lobes strongly curved inwards, apices pointed and overlapping; aedeagus moderately long with large head in ventral view and a subapical peg-like process jutting out ventrally; gonocoxite with a pointed distal end (in lateral view).

Paralectotypes: 3 ♂ 1 ♀ 1?. Agree well with lectotype.

Lectotype designation: Ricardo (1920) did not list all her material in detail and did not designate a holotype. I hereby designate a Willbrook ♂ as lectotype. Other specimens in the BM (listed below) are considered paralectotypes. I have not seen Ricardo's specimen from Mfongosi.

Material examined: SOUTH AFRICA: *Natal:* 2 ♂ 1 ♀ (lectotype & paralectotypes), Willbrook (2929BB), 17.ii.1914 (2M) 7.i.1914 (F) (BM); 2 ♂ 1? (probably ♀ mentioned by Ricardo) (paralectotypes), Willow Grange (2929BB), Wroughton (BM); 1 ♂, Camperdown (2930DA), 3.iii.1908, Leigh (NM); 1 ♂, Estcourt (2929BB), 1/97 (= i.1897) (NM); 3 ♂, P.M.B. (Pietermaritzburg) (2930CB); 4 & 6.iv.1953, Wiese (NM, NCI); 1 ♂, Mhlopeni Nat Reserve (2930AB), 8 km SE Muden, 8.iv.1983, Londt, Barraclough & Seymour, thornveld (NM); 1 ♂ 1 ♀ (pinned together), Mfongosi (2830DB), ii.1912, Jones (SAM)—(not the specimens referred to by Ricardo); 2 ♂ 1 ♀, Estcourt (2829DD), 26.iii.1913, Wroughton (ZSM). *Transvaal:* 1 ♂, Bourkes Potholes, 60 km N Grasskop (2430DB), 14.iv.1985, J & B Londt (NM).

Previously recorded material: Engel (1927) lists specimens from Willowgrange, Camperdown, Estcourt and Shilouvane (Transvaal); I have seen most of these. The Shilovane specimens were probably incorrectly identified as I have seen a single male from this locality which belongs to a closely related species (*rolandi* sp. n.).

Distribution: Known from Natal and eastern Transvaal.

Neolophonotus rapax (Ricardo, 1920)

Figs 124–127

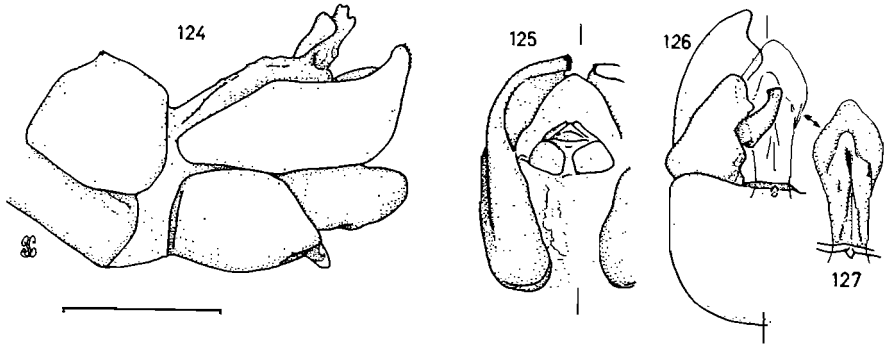
Dysmachus rapax Ricardo, 1920:390–1.
Neolophonotus rhodesiensis Hobby, 1933:110–1 **Syn. n.**
N. (Lophopeltis) rhodesiensis; Bromley, 1949:65.

Description: Based on lectotype ♂.

Head: Antenna black; scape and pedicel with shortish black setae, segment 3 with a few tiny golden setae dorsodistally; Eye:face ratio 1:0,24; eye:lower facial margin ratio 5,9:1. Mystax fine yellow centrally and black along lateral margins and along lower facial margin. Occipital setae: upper—long black; central—yellow-white and black; lower—yellow-white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s yellow. Mesonotal setae: acr absent; dc black *ca.* 9 pairs both in front of and behind suture; pprn longish thin yellow, a few short black; 3/3 black npl; 3/3 black spal; 2/2 black pal; mane absent anteriorly, a weak cluster of black setae behind suture. Scutellum with *ca.* 7 yellow marginal bristles; disc with sparse yellow setae. Wing: 11,0 × 3,9 mm; membrane transparent and slightly yellow tinged. Legs: uniform dark red-brown; cx1 with yellow bristles and setae anteriorly; cx3 with no bristles laterally. Hind femur: bristles yellow and black, setae yellow (few black ventrally), short setae fine yellow.

Abdomen: Dark red-brown, silver-gold pruinose. T3 with 4 yellow marginal and 2 weak discal bristles; fine setae longish yellow-white laterally, shorter black dorsally. Genitalia as in Figs 124–127; epandrial lobes curved inwards and upwards distally, apices with a group of black short squat setae. Aedeagus moderately long with large head in ventral view; gonocoxite with a broadly rounded distal end which juts out beyond the level of the epandrium (in lateral view); hypandrium with a tiny notch on hind margin centrally (in ventral view).



Figs 124–127. *Neolophonotus rapax* (Ricardo, 1920) lectotype male genitalia. 124. Lateral. 125. Dorsal. 126. Ventral. 127. Detail of aedeagus.

Paralectotypes: 1 ♀, similar to lectotype.

Lectotype designation: Ricardo (1920) mentions two types (male and female) and a long series of specimens from Malawi. I have seen all this material and have decided that it is unnecessary to include all in the type series. I therefore designate the male (presently in drawer BB226) lectotype and the female paralectotype. All the other material (mostly in other drawers together with other Neave-collected specimens) I leave with no type status. There is little variation in morphology seen within this large sample.

Material examined: MALAWI: 1 ♂ (lectotype), Mlanje (1635AB), 25.ii.1913, Neave, F>F1 (BM); 1 ♀ (paralectotype), same data but 10.iv.1913 (BM); Many ♂ & ♀, Mlanje & Ruo Valley (BM). ZIMBABWE: 1 ♂ 1 ♀ (holotype & paratype—*rhodesiensis*), Gazaland (should read grassland) nr Chirinda (1628BB), 25.ii.1912, Swynnerton, 3800 ft (HMO). ZAMBIA: 1 ♂, 17 mi N of Muyombe (? Muyembe—13°35'S:22°46'E), 20.ii.1958, 1500 m, Ross & Leech (CAS).

Previously recorded material: Bromley (1948) recorded a number of species of African bee-killing Asilidae. Among these he lists *N. (Lophopeltis) rhodesiensis*. The records given are: 3 ♂ 2 ♀, Mt Chirinda, ii–iii.1912, Swynnerton; 2 ♀, Barberton, 10.iv.1920, Munro. I have not seen specimens of *rapax* from South Africa and doubt Bromley's identification of these Barberton females.

Distribution: Presently known from Malawi, Zimbabwe and Zambia.

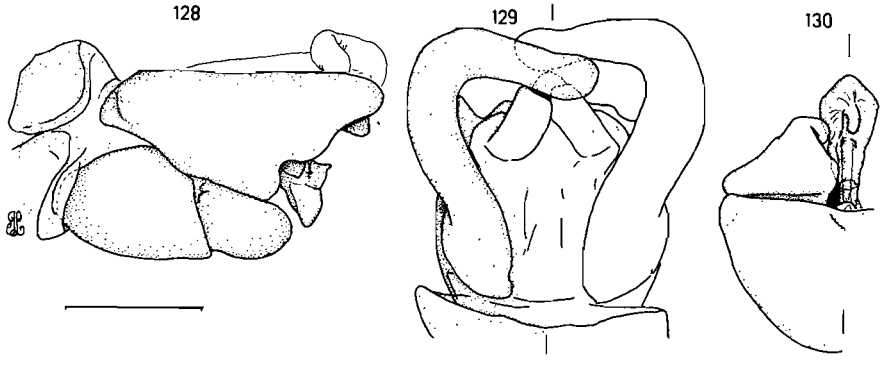
Neolophonotus rolandi sp. n.

Figs 128–130

Etymology: Named for Roland Elferink who has assisted me by collecting many interesting specimens in the Transvaal, including examples of this new species.

Description: Based on holotype ♂.

Head: Antenna dark red-brown; scape and pedicel with black setae (1 white on dorsal surface of scape). Eye:face ratio 1:0,27; eye:lower facial margin ratio 5,0:1. Mystax yellow-white with a few black setae laterally and on lower facial margin.



Figs 128–130. *Neolophonotus rolandi* sp. n. paratype male genitalia. 128. Lateral. 129. Dorsal. 130. Ventral.

Occipital setae: upper—black; central—yellow-white; lower—yellow-white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s yellow-white. Mesonotal setae: acr absent; dc black (1 yellow-white) *ca.* 8 pairs extending well anterior of suture; pprn tiny yellow-white; 3/3 yellow npl; 3/3 yellow spal; 2/2 yellow pal; mane very poorly developed with only a few sparse yellow setae behind suture. Scutellum with 7 yellow marginal bristles; disc with few yellow-white setae. Wing: 9,7 × 3,5 mm; membrane transparent and colourless. Legs: black; cx1 with yellow-white bristles and setae anteriorly; cx3 with no bristles laterally. Hind femur: bristles pale yellow-white, long and short setae yellow-white.

Abdomen: Dark red-brown, silver-gold pruinose. T3 with 2–3 yellow-white marginals and 1 small yellow-white discal bristle; fine setae all yellow-white. Genitalia as in Figs 128–130; epandrial lobes strongly curved inwards with broadly rounded apices which overlap; aedeagus short, broadly rounded at apex and with a peg-like ventrally directed process subapicaly; gonocoxite broadly rounded distally.

Paratypes: 14 ♂ 10 ♀ similar to holotype.

Material examined: SOUTH AFRICA: *O.F.S.:* 2 ♂ 2 ♀ (holotype & paratypes), 2 km SE Harrismith (2829AC), 29.iii.1982, Londt & Schoeman, rocky hill/grassland (NM); 1 ♀ (paratype), 20 km W Bloemfontein (2926AA), 26.iii.1982, Londt & Schoeman, open grass & sand (NM). *Transvaal:* 1 ♂ (paratype), Shilouvane (Shilovane—2430AB), ii.1906, Junod (NM); 1 ♂ (paratype), Doringkloof (2528CC), v.1980, du Toit (NM); 3 ♂ 4 ♀ (paratypes), Halfway House (2528CC), Jukskei River, 28.ii.1982, Elferink (NM); 1 ♂ (paratype), Rdpt (Roodepoort—2627BB), iv.1968, H. L. (NM); 5 ♂ 1 ♀ (paratypes), Blinkwater (2329AA), 9 & 10.iv.1979, Meiswinkel, midday & 11 am (NM). LESOTHO: 2 ♂ 2 ♀ (paratypes), Roma mission, Maseru Dist (2927AD), 3–13.i.1963, Stuckenberg, 6000 ft, upper cave-sandstone level (NM).

Distribution: Transvaal, O.F.S. and eastern Lesotho.

Neolophonotus schoemani sp. n.

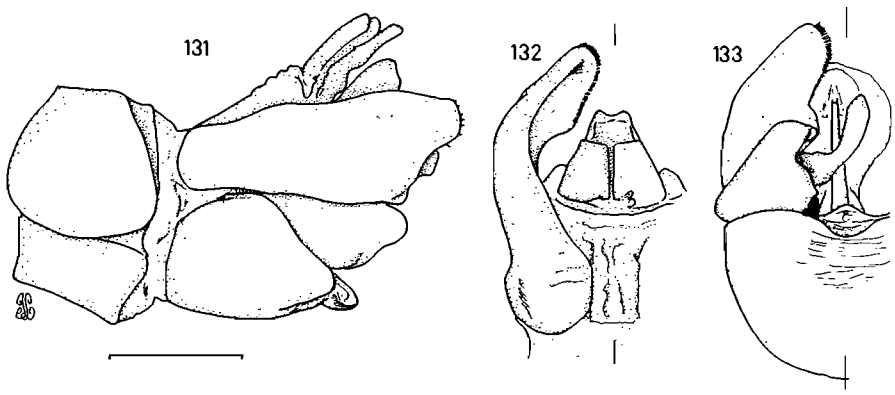
Figs 131–133

Etymology: Named for my friend Mr Lou Schoeman who has accompanied me on a number of collecting trips, and who helped in the collection of some of the types.

Description: Based on holotype ♂.

Head: Antenna dark red-brown to black; scape with black and white setae, pedicel with black setae only. Eye:face ratio 1:0,30; eye:lower facial margin ratio 4,4:1. Mystax yellow-white, thick. Occipital setae: upper—black; central—white; lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s white. Mesonotal setae: acr absent; dc black, *ca.* 6 pairs posterior of suture; pprn tiny, white; 3/3 black npl; 3/3 black spal; 3/3 black pal; mane absent anteriorly, sparse black and white behind suture. Scutellum with 10 black and white marginal bristles; disc with 1 black bristle and sparse black and white setae. Wing: 13,1 × 4,3 mm; membrane transparent and colourless. Legs:



Figs 131–133. *Neolophonotus schoemani* sp. n. holotype male genitalia. 131. Lateral. 132. Dorsal. 133. Ventral.

black; cx1 with white bristles and setae anteriorly; cx3 with no bristles laterally. Hind femur: bristles black and white, long and short setae white.

Abdomen: Dark red-brown to black, gold-silver pruinose. T3 with 4 white marginal and 2 white discal bristles; fine setae white laterally, black along dorsal midline. Genitalia as in Figs 131–133; epandrial lobes blunt and with short, black, spine-like setae at apices; aedeagus short, thin and pointed at apex in ventral view; gonostylus with a broadly rounded apex in lateral view; hypandrium with a central dome-like process medially on hind margin.

Paratypes: 11 ♂ 9 ♀ similar to holotype, but some of the mesonotal bristles may be white.

Material examined: SOUTH AFRICA: *Cape Province:* 1 ♂ (holotype) 4 ♀ (paratypes), 15 km S Twee Rivieren (2620DA), 21.iii.1982, Londt & Schoeman, dry roadside vegetation (NM); 1 ♂ (paratype), *ca.* 5 km W Hotazel (2722BB), 23.iii.1982, Londt & Schoeman, acacias/grass/shrubs (NM); 1 ♂ (paratype), Grootpan E Lime Acres (2823BC), 25.iii.1982, Londt & Schoeman, grass in pan centre (NM); 1 ♀ (paratype), 30 km E Groblershoop (2822CD), 19.iii.1982, Londt & Schoeman, roadside vegetation (NM); 1 ♂ (paratype), 17 km S Kuruman (2723CB), 23.iii.1982, Londt & Schoeman, rocky hilltop/grass (NM); 2 ♀ (paratypes), 10 km E Padkuil (2823BD), 25.iii.1982, Londt & Schoeman, dry stony area/low trees (NM); 2 ♀ (paratypes), 46 km W Bloemfontein (2925BB), 26.iii.1982, Londt & Schoeman, gentle slope with rocks shrubs and grass (NM); 1 ♀ (paratype), Karoo Regon, Verneuk Pan (2921CC), iii.1936, Brown (NCI); 1 ♂ (paratype), Bordeaux (2624Cb), 23.ii.1980, Whitehead (SAM). NAMIBIA: 1 ♀ (paratype), Regenstein 32, Windhoek, SE 2217Ca, 6.iii.1973, H 12046 (SMW). BOTSWANA: 1 ♂ (paratype, Mochudi (SE2426Ac), 19–21.iv.1982, Louw (NMB). NM Type No. 2992. SMW Type No. 693

Distribution: Northern Cape Province, Botswana and Namibia.

Prey records: Four females were collected together with prey: Lepidoptera

(*Danaus chrysippus* & *Eurema briggita*), Hymenoptera (Pompilidae), Orthoptera (Acrididae).

Neolophonotus swaensis sp. n.

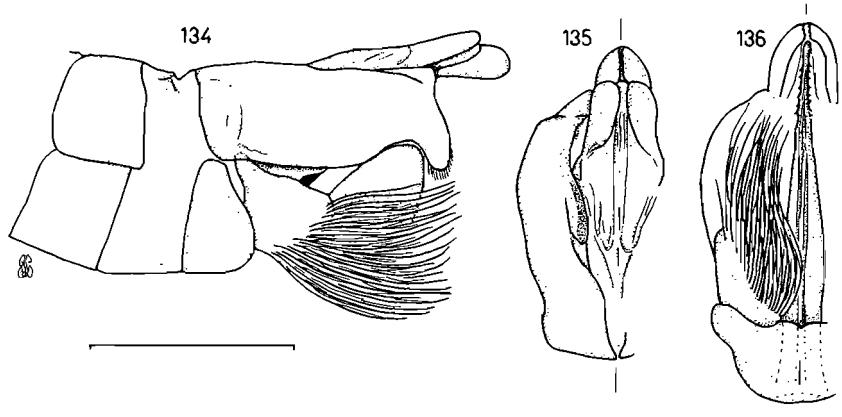
Figs 134–136

Etymology: Name based on the acronym for the country in which the unique holotype was collected—SWA (South West Africa=Namibia).

Description: Based on unique holotype ♂.

Head: Antenna dark red-brown to black; scape with black bristles and black and white setae, pedicel with black setae only. Eye:face ratio 1:0,18; eye:lower facial margin ratio 29,5:1 (ie. very shallow facial margin). Mystax white with black setae in upper part. Occipital setae: upper—long, white, proclinate; central—black and white; lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s pale yellow, mtanepst s white. Mesonotal setae: acr black, anteriorly only; dc black, *ca.* 8 pairs, go well anterior of suture; pprn with long white setae; 2/2 pale yellow npl; 2/1 black (1 yellow) spal; 1/1 black pal; mane with black setae anteriorly, white postsuturally. Scutellum with 2 black marginal bristles; disc with white setae only. Wing: 4,7 × 1,6 mm; membrane transparent and colourless (tip of wing yellow-brown stained). Legs: dark red-brown, dorsoproximal parts of tibiae orange-brown; cx1 with white setae anteriorly; cx3 lacking bristles laterally. Hind femur: bristles white (1 or 2 black), long and short setae white.



Figs 134–136. *Neolophonotus swaensis* sp. n. holotype male genitalia. 134. Lateral. 135. Dorsal. 136. Ventral.

Abdomen: Dark red-brown, silver and gold pruinose. T3 with few pale yellow marginal bristles, no discals evident; fine setae white laterally, black dorsally. Genitalia as in Figs 134–136; epandrial lobe with a downturned tip (in lateral aspect); gonocoxite equipped with numerous long black setae which conceal its shape; gonostylus greatly expanded and platelike; aedeagus long and thin, with small spinelike processes apically.

Material examined: NAMIBIA: 1 ♂ (holotype), Kaokoland, Otjinungwa, SE1712Ab, H13622 (SMW). SMW Type No. 694.

Distribution: Known only from the type-locality.

Neolophonotus torridus sp. n.

Figs 137–139

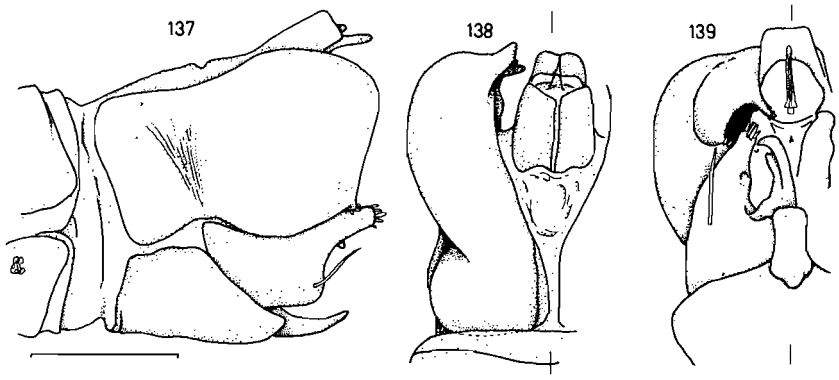
Etymology: L. *torridus* = dry, parched, hot, scorched. Refers to the fact that the species was found in rather arid places.

Description: Based on holotype ♂.

Head: Antenna with scape and pedicel orange-brown, rest dark red-brown; scape and pedicel with white setae (major bristles black). Eye:face ratio 1:0,26; eye:lower facial margin ratio 5,8:1. Mystax yellow-white (a few black along lower facial margin). Occipital setae: upper—short, black; central—pale yellow; lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s yellow (bristles) white (setae), mtanepst s white. Mesonotal setae: acr absent; dc black, 3 pairs, postsuturally; pprn tiny white; 2/2 yellow npl; 1/1 black spal; 2/2 black pal; mane weak or completely absent. Scutellum with 3 black marginal bristles, disc with short black setae (a few white). Wing: 9,6 × 3,2 mm; membrane transparent and colourless. Legs: femur black, rest dark red-brown; cx1 with white setae anteriorly; cx3 with fine white setae only (no bristles). Hind femur: bristles black, short black (yellow of outer and inner faces), long setae few, white, short setae white.

Abdomen: Dark red-brown, gold-silver pruinose. T3 with 4–5 short yellow marginals and 1 short yellow discal bristle; fine setae yellow, black dorsally. Genitalia as in Figs 137–139; epandrial lobe rather bulbous; hypandrium with a dorsoventrally flattened median process; gonocoxite with longish tapering distally projecting process; gonostylus short; aedeagus large, with a bulbous, membranous tip.



Figs 137–139. *Neolophonotus torridus* sp. n. paratype male genitalia. 137. Lateral. 138. Dorsal. 139. Ventral.

Paratypes: 38 ♂ 26 ♀ similar to holotype. Females may be slightly different with respect to setal colour and number.

Material examined: NAMIBIA: 5 ♂ (holotype and paratypes), Khan River, 24 km N Karibib, road 2/3 21°47′S:15°55′E, 27.iii.1984, Londt & Stuckenberg, acacias/dry river bed (NM); 2 ♂ (paratypes), 10 km W Karibib, road 2/3, 21°56′S:15°45′E, 27.iii.1984, Londt & Stuckenberg, roadside shrubs with open sandy patches (NM); 2 ♂ (paratypes), 18 km N Karibib, road 2/3, 21°48′S:15°55′E, 27.iii.1984, Stuckenberg & Londt, roadside vegetation esp. *Catophractes* sp. (NM); 7 ♂ 6 ♀ (paratypes), 28 km E Khorixas, road 65, 20°16′S:15°12′E, 24.iii.1984, Londt & Stuckenberg, mixed Mopane woodland (NM); 7 ♂ 3 ♀ (paratypes), 52 km W Outjo, road 65, 20°14′S:15°40′E, 24.iii.1984, Stuckenberg & Londt, Mopane woodland on rocky hillside (NM); 1 ♂ (paratype), 28 km W Outjo, road 65, 20°12′S:15°53′E, 24.iii.1984, Londt & Stuckenberg, mixed bushveld, grass & flowers along road (NM); 5 ♂ 2 ♀ (paratypes), 30 km S Omaruru, road 2/3, 21°41′S:15°57′E, 27.iii.1984, Stuckenberg & Londt, sparse acacia scrub in cattle pasture (NM); 1 ♂ 1 ♀ (paratypes), Usakos town dump, 22°00′S:15°34′E, 27.iii.1984, Stuckenberg & Londt, poor acacia woodland stony ground (NM); 1 ♀ (paratype), 20 km W Okahandja, road 7/1, 21°56′S:16°42′E, 28.iii.1984, Stuckenberg & Londt, mixed woodland with bare ground (NM); 3 ♂ 4 ♀ (paratypes), Omaruru commonage, 21°26′S:15°57′E, 27.iii.1984, Londt & Stuckenberg, acacia savanna with large boulders (NM); 3 ♀ (paratypes), Ozambanda River, 30 km W Okahandja, road 7/1, 21°54′S:16°37′E, 28.iii.1984, Stuckenberg & Londt, rocks, grass & shrubs (NM); 1 ♀ (paratype), 15 km W Usakos, road 2/2, 21°58′S:15°30′E, 28.iii.1984, Londt & Stuckenberg, roadside vegetation—flowers (NM); 3 ♂ 2 ♀ (paratypes), Noas 273, Outjo SE1914DC, 10–11.v.1973, H12864 (SMW); 2 ♂ (paratypes), Amaib 60, Karibib SE2115DC, 1–2.ii.1972, H6354 (SMW); 1 ♀ (paratype), Otjitambi 25, Outjo SE1915DC, 14–15. ii.1972, H6629 (SMW) 1 ♂ (paratype), Omaruru Dist., 25 km NW Omaruru, 2115Bd, 5.ii.1974, Irwin, 1200 m, dry wash in acacia-covered plain (NM). NM Type No. 2993. SMW Type No. 695.

Distribution: Widely distributed in central Namibia.

Prey records: 1 ♂ and 1 ♀ were collected with prey—Lepidoptera (Pieridae).

Neolophonotus trilobius sp. n.

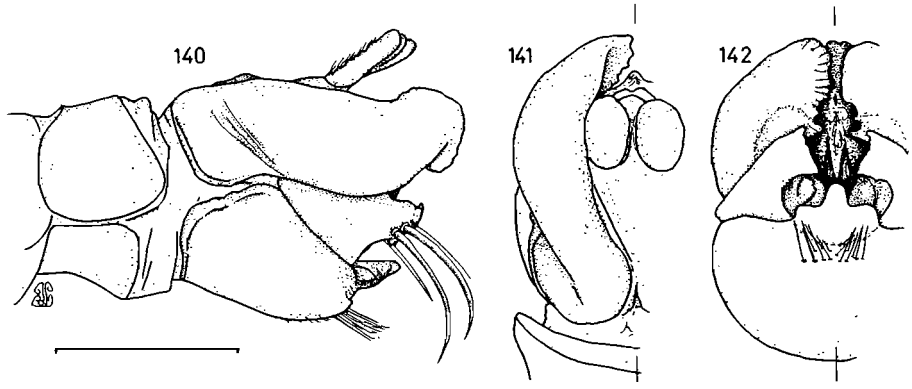
Figs 140–142

Etymology: L. *tri-* = thrice (three); *lobus* = lobe. Refers to the trilobed process found on the hind margin of the hypandrium.

Description: Based on holotype ♂.

Head: Antenna black; scape and pedicel with black setae, a few white ventrally on scape. Eye:face ratio 1:0,24; eye:lower facial margin ratio 6,3:1. Mystax white with a few black setae on lower facial margin. Occipital setae: upper—black; central—yellow-white; lower—white. Proboscis and palpi dark red-brown.

Thorax: ktg s and mtanepst s pale yellow. Mesonotal setae: acr absent; dc black, *ca.* 7 pairs, only 2 pairs anterior of suture; pprn tiny, black and white; 2/2 black npl; 3/3



Figs 140–142. *Neolophonotus trilobius* sp. n. paratype male genitalia. 140. Lateral. 141. Dorsal. 142. Ventral.

black spal; 2/2 (1 black and 1 yellow) pal; mane absent anteriorly, thin yellow-white setae behind suture. Scutellum with 4 black marginal bristles; disc without setae. Wing: 7,6 × 2,2 mm; membrane transparent and colourless. Legs: black; cx1 with white bristles and setae anteriorly; cx3 with no bristles laterally. Hind femur: bristles black (some yellow), long and short setae white.

Abdomen: Dark red-brown to black, silver pruinose. T3 with 2–3 yellow marginal and 1–2 yellow discal bristles; fine setae yellow laterally, black along dorsal midline. Genitalia as in Figs 140–142; gonocoxite with three well-developed bristles subapically; hind margin of hypandrium with a three-lobed process easily seen in ventral view (a small group of black setae immediately behind this process).

Paratypes: 21 ♂ 23 ♀ similar to holotype.

Material examined: SOUTH AFRICA: *Cape Province:* 5 ♂ (holotype & paratypes) 9 ♀ (paratypes), *ca.* 10 km SE Hotazel (2723AC), 23.iii.1982, Londt & Schoeman, rocky area/big shrubs (NM); 3 ♂ 1 ♀ (paratypes), 46 km W Bloemfontein (2925BB), 26.iii.1982, Londt & Schoeman, gentle slope with rocks shrubs and grass (NM); 1 ♂ 1 ♀ (paratypes), Hill near Olifantshoek (2722DC), 24.iii.1982, Londt & Schoeman, rocky hillside grass & acacia trees (NM); 1 ♀ (paratype), 60 km W Kimberley (2824CA), 25.iii.1982, Londt & Schoeman, acacias/grass/sand (NM). NAMIBIA: 6 ♂ 4 ♀ (paratypes), 25 km W Windhoek (2216DB), 22.iv.1983, Londt & Stuckenberg, thornveld (NM); 2 ♀ (paratypes), 20 km W Usakos (2115CD), 24.iv.1983, Londt & Stuckenberg, sparse savanna (NM); 5 ♂ 2 ♀ (paratypes), 158 km W Windhoek (2215DB), 22.iv.1983, Londt & Stuckenberg, thornveld in dry river bed (NM); 1 ♂ (paratype), 7 km SW Gross Barmen (2216BA), 24.iv.1983, Stuckenberg & Londt, thornveld (NM); 2 ♀ (paratypes), 24 km W Windhoek (2116DA), 22.iv.1983, Stuckenberg & Londt, thornveld in dry river valley (NM); 1 ♀ (paratype), Hohenheim, 150 km W Windhoek (NM); 1 ♂ 1 ♀ (paratypes), Windhoek Dist, Windhoek (2217CA), 3.xi.1974, Irwin, 1600 m, sandy river bottom (NM). NM Type No. 2994.

Distribution: Northern Cape Province and Namibia.

Neolophonotus zimbabwe sp. n.

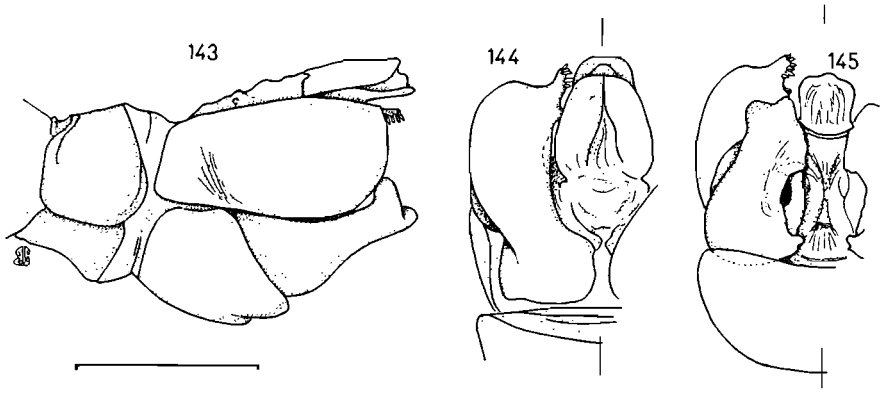
Figs 143–145

Etymology: Named after the country of Zimbabwe, where the unique holotype was collected.

Description: Based on unique holotype ♂.

Head: Antenna dark red-brown; scape and pedicel with black setae. Eye:face ratio 1:0,21; eye:lower facial margin ratio 8,0:1. Mystax white (black on lower facial margin). Occipital setae: upper—long, black, proclinate; central—white (1 black); lower—white. Proboscis and palpi dark red-brown to black.

Thorax: ktg s and mtanepst s white. Mesonotal setae: acr absent; dc black, 3 postsutural pairs; pprn small black and white; 2/2 black npl; 2/2 black spal; 2/2 black pal; mane absent anteriorly, weak, white posteriorly. Scutellum with 3 black marginal bristles, disc with short, white setae (a few black). Wing: 7,0 × 2,4 mm; membrane transparent and colourless. Legs: dark red-brown, dorsoproximal parts of tibiae yellow-brown; cx1 with white bristles and setae anteriorly; cx3 without bristles. Hind femur: bristles black (dorsally and ventrally) pale yellow (anteriorly and posteriorly), long setae not obvious, short setae white (black ventrally and dorsally).



Figs 143–145. *Neolophonotus zimbabwe* sp. n. holotype male genitalia. 143. Lateral. 144. Dorsal. 145. Ventral.

Abdomen: Dark red-brown, gold pruinose. T3 with 2 pale yellow-white marginals and 1 pale yellow-white discal bristle; fine setae white laterally, black dorsally. Genitalia as in Figs 143–145; epandrial lobe with a small distal projection bearing stubby setae; gonocoxite long (projects beyond epandrial lobe); aedeagus large, with a bulbous, membranous tip.

Material examined: ZIMBABWE: 1 ♂ (Holotype), Umgusa Forest, Sawmills (1928CA), 13–14.xi.1971, Nat Mus S Rhodesia, E. Pinhey (NMB).

Distribution: Known only from the type-locality.

Neolophonotus zulu sp. n.

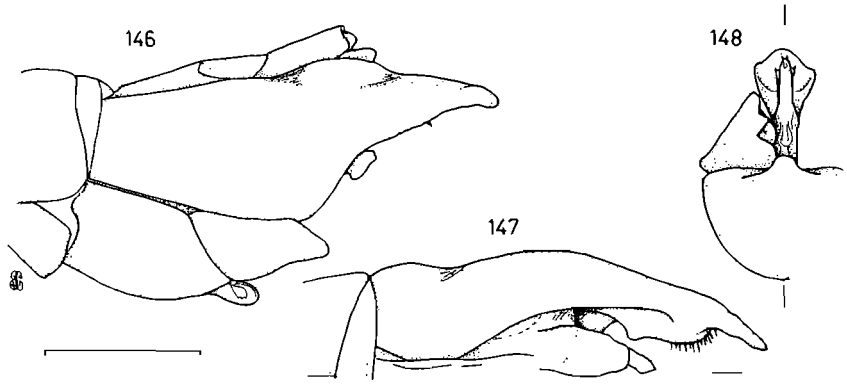
Figs 146–148

Etymology: This species was collected in Zululand.

Description: Based on holotype ♂.

Head: Antenna black; scape and pedicel with black and yellow setae. Eye:face ratio 1:0,24; eye:lower facial margin ratio 5,3:1. Mystax white-yellow. Occipital setae: upper—black and white; central—yellow-white; lower—yellow-white. Proboscis and palpi dark red-brown.

Thorax: ktg s and mtanepst s yellow-white. Mesonotal setae: acr absent; dc black, *ca.* 9 pairs, only 3 anterior of suture; pprn short yellow; 3/3 pale yellow npl; 3/3 pale yellow spal; 2/2 pale yellow pal; mane absent anteriorly, sparse yellow-white behind suture. Scutellum with 6 yellow-white marginal bristles; disc with yellow-white setae. Wing: 10,8 × 3,1 mm; membrane pale yellowish but greyish at wing tip. Legs: black; cx1 with yellow-white bristles and setae anteriorly; cx3 with no bristles laterally. Hind femur: bristles pale yellow-white (1 black), long and short setae pale white.



Figs 146–148. *Neolophonotus zulu* sp. n. holotype male genitalia. 146. Lateral. 147. Dorsal. 148. Ventral.

Abdomen: Dark red-brown to black, strongly gold pruinose. T3 with 2–3 yellow marginal bristles; fine setae yellow, a few black ones on hind margin dorsally. Genitalia as in Figs 146–148; epandrial lobe acutely pointed distally (in lateral view); gonocoxite also pointed distally; hind margin of hypandrium with a central distally directed process; aedeagus with bulbous head.

Paratypes: 15 ♂ 12 ♀ 2? similar to holotype.

Material examined: SOUTH AFRICA: *Natal:* 1 ♂ 2 ♀ (holotype & paratypes), 14 km SE Ingwavuma (2732AA), 21.ii.1979, Londt, grassy area (NM); 1 ♂ (paratype), 15 km SE Ingwavuma, 21.ii.1979, Londt, grassy area (NM); 1 ♂ 2 ♀ (paratype), Pongola Bush Nat Res, 15 km W Luneburg (2730BC), 19.ii.1979, Londt, forest and surrounding area (NM); 3 ♂ 2 ♀ 2? (paratypes), M'fungosi (2830DB), iv.1916 iv–v.1934 v.1917, Jones (SAM). *Transvaal:* 1 ♂ 2 ♀ (para-

types), 5 km N Barberton (2531CC), 6.iv.1985, Londt, rocky slope–grass (NM); 3 ♂ 1 ♀ (paratypes), Sabie (2530BB), 15.iii.1979, Schoeman (NM); 1 ♂ (paratype), SE2630DD, 6.iv.1981, Liessner, Univ Pretoria (NM); 1 ♂ (paratype), Nelspruit (2531DA), 11.iv.1982, Jansson, Univ Pretoria (NM); 1 ♂ 1 ♀ (paratypes), Barberton (2531CC), iii.1979, Marrop (NCI); 1 ♂ (paratype), Barberton, iii.1979, Moolman (NCI); 1 ♂ (paratype), Barberton, iii.1979, Eardley (NCI); 1 ♂ (paratype), Barberton, 1911, 383, Randall (NCI). SWAZILAND: 2 ♀ (paratypes), Ntabambomvu Hills, Piggs Peak Road, 26°07'S:31°10'E, 26.ii.1971, Stuckenberg, mixed montane (NM). NM Type No. 2995. SAM Type No. 3870 (paratypes).

Distribution: Northern Natal, Swaziland and eastern Transvaal.

Prey records: 2 ♀ were collected with prey (Lepidoptera—Ctenuchidae, Arctiidae).

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INDEX OF SPECIES OF *NEOLOPHONOTUS* INCLUDED IN THIS PAPER

Names in italics are synomyms of the species shown in brackets. The groups to which a species belongs is indicated thus: A = *chionthrix* group, B = *squamosus* group, C = *angustibarbus* group.

Species	Group	Page No.
acuminatus sp. n.	A	56
agrestis sp. n.	A	57
aktites sp. n.	A	58
albopilosus (Ricardo, 1920)	C	90
amplus sp. n.	A	60
anguicolis sp. n.	A	61
angustibarbus (Loew, 1858)	C	92
ausensis sp. n.	B	76
bicuspis sp. n.	B	77
brevicauda sp. n.	B	78
chionthrix Hull, 1967	A	62
coetzeei sp. n.	A	63
crassicolis sp. n.	A	64
crenulatus sp. n.	A	65
culinarius sp. n.	C	93
expandocolis sp. n.	A	66
fimbriatus Hull, 1967	C	94
gertrudae sp. n.	C	95
junodi sp. n.	C	97
kalahari sp. n.	C	98
lawrencei sp. n.	B	79
leucothrix sp. n.	A	67
macrocercus sp. n.	A	68
milleri sp. n.	A	69
namaqua sp. n.	A	70
namibiensis sp. n.	A	71
nigripes (Ricardo, 1920)	C	99
nigriseta sp. n.	B	80
obtectocolis sp. n.	A	72
rapax (Ricardo, 1920)	C	101
rhodesiensis Hobby, 1933 (see rapax)		
robertsoni sp. n.	A	73
rolandi sp. n.	C	102
schalki sp. n.	B	81
schoemani sp. n.	C	103

Species	Group	Page No.
spinicaudata sp. n.	B	82
squamosus sp. n.	B	83
stevensoni sp. n.	B	84
swaensis sp. n.	C	105
theroni sp. n.	B	85
torridus sp. n.	C	106
trilobius sp. n.	C	107
truncatus sp. n.	B	86
zimbabwe sp. n.	C	109
zulu sp. n.	C	110